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WILDFERN PACKAGING

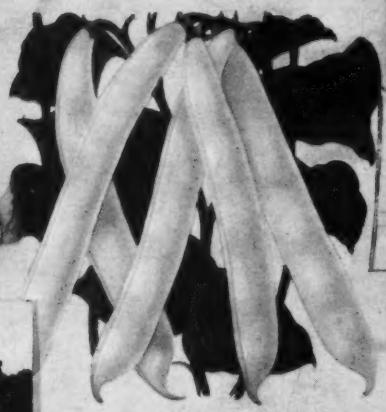
BEET
TECHNOLOGY



ONION



BEANS



PEAS



TOMATO



SPINACH



DAIRY
APR 23 1945

CARROT



Palletizing WITH ADHESIVES

EXCLUSIVE!

PALLET ADHESIVE # 4 was formulated in collaboration with military authorities. It is the first adhesive to be tested and approved for unitizing corrugated or solid fiber shipping containers on standard wooden pallets. Its high shear strength locks the unitized load during shipping. Its low tensile strength permits easy unit separation during unloading — with a minimum of tearing that leaves the cartons fit for reuse. Adhesive palletizing is now being adopted in wooden boxes.

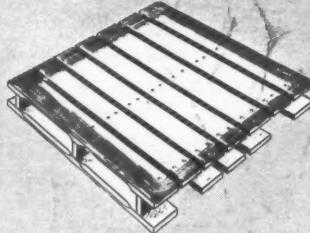
SAVES

Steel
Labor
Time
Containers

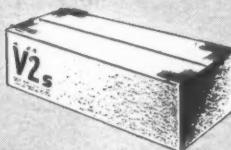
PREVENTS

Break-up
Damage
Pilferage

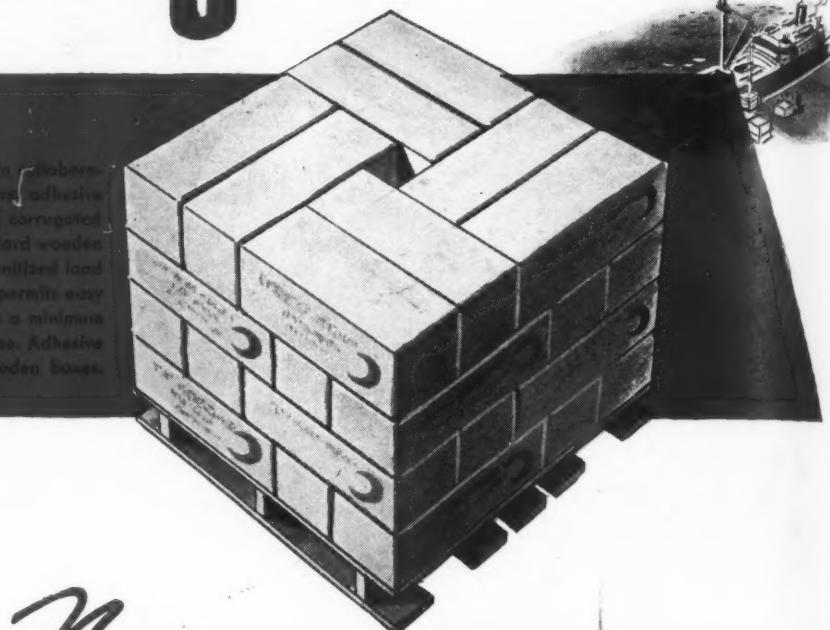
EASY TO APPLY



PALLET ADHESIVE # 4 is applied by brush around the perimeter of the pallet. Then the first layer of cartons is placed in position.



An L-shaped strip of adhesive is then applied to the top corners of each carton — to lock the succeeding layers in place.



Now SPEEDS MULTIPLE-UNIT WAR DELIVERIES

All war contractors—large or small—can now make palletized shipments whether or not they are equipped with special tools for steel strapping and mechanical handling equipment.

A fast-setting, mold-proof, brush applied adhesive . . . National's PALLET ADHESIVE # 4 . . . permits unit loading either inside the plant at the delivery conveyor — or directly on pallets in the freight car or delivery truck.

Domestic shipments to prime contractors equipped with fork-lift trucks — or to the home depots of the Services need no further binding.

Overseas shipments can be 3-strapped (instead of 6-strapped) by the Services at ports of embarkation or by specially equipped contractors.

Government specifications calling for palletized units are rapidly being extended to all contractors. The advantages of palletizing with adhesives are many: Unit loading saves time, labor, critical metal and handling equipment. Rehandling caused by load break-up is eliminated. Damage in transit is lessened. Pilfering is discouraged. And savings in container costs are made possible.

Further information is available NOW! Address: National Adhesives, 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Company, Ltd., Toronto and Montreal.

National
ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY TYPE OF ADHESION

ES

Producers of Metal and Molded Caps for Glass Packages



Phoenix Metal Cap Co., Chicago 8 and Brooklyn 18

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THE COVER

Several million victory gardeners will be planting seeds this month from brilliantly illustrated packets. Such packets, properly identified with seed producer's name, kind of seed, variety, germination, directions for planting, are the purchaser's assurance of getting a reliable stock of tested seeds. Packaged seeds, properly branded, have been important in forcing unreliable seed from the market.

The seed packages illustrated on this month's cover by Peter Piening are actual reproductions of seed envelopes printed by Stecher-Traung Lithograph Co.

All editorial contents bearing on military subjects have been approved for publication by the Armed Services.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index*.

MODERN PACKAGING

VOLUME 18

APRIL 1945

NUMBER 8

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A treat to eat... but
Hard-to-Wrap!

— 2 Redingtons wrap
and carton it with speed,
neatness and efficiency



Marvin's Mince Meat is a fine quality product requiring the finest of packaging to protect its goodness. But the problem of packaging so sticky an item is difficult . . . a brick of mince meat simply *can't* be handled on a *standard* packaging machine. *Something special* had to be designed—and Redington designed it—a special wrapping machine with an operation that's simple, speedy and sanitary.

This machine cuts wax paper wrappers from a roll and places these wrappers in the pockets of the intake conveyor. The bricks of mince meat are placed in the wrappers and the machine *automatically* folds the wrapper around the bricks, sealing the long seam, then folding, and sealing the end folds.

The wrapped brick is then *transferred* to a Redington Cartoning Machine which feeds a carton from a magazine . . . *expands it* . . . inserts the wrapped brick and closes the carton by *double-gluing* the end flaps.

A *third Redington* Cellophane-wraps the carton, completing the packaging.

The care exercised by Marvin in producing this *quality product* has created a demand, not only for their own brand, Marvin, but also for *thousands of packages* for large chain stores under their own private names.

Another example of Redington's ability to supply high-speed, efficient packaging equipment, even on *hard-to-handle products*; another reason why post-war planners say, "*If It's Packaging, Try Redington First.*"

F. B. REDINGTON CO., (Est. 1897) 110-112 So. Sangamon St., Chicago 7, Ill.

REDINGTON

PACKAGING MACHINES

FOR CARTONING • WRAPPING • SPECIAL PACKAGING



Good Advice . . .

for all of us . . . at times.

But we have never talked even half enough about the satisfaction you will enjoy by specifying



**FOOD PROTECTION
PAPERS**

KALAMAZOO VEGETABLE PARCHMENT COMPANY
PARCHMENT • KALAMAZOO 99 • MICHIGAN



**Bookmakers are
giving odds on Geon**

Because—with Geon it's the combination of properties that counts

IT'S BETTER than even money that GEON-coated fabric—or paper—or flexible unsupported sheet—will be broadly used for book-binding when the GEONS are released for non-military applications. That's because a product made from GEON can be *planned* to include the properties needed.

For example, the ideal book binding must wear well—particularly in public library service. Covers made from GEON will wear indefinitely, because of their excellent resistance to abrasion and their long flex life. They won't be appreciably affected by age, either . . . Books get dirty. Covers made from GEON will be waterproof, easily washed . . . Color is an important factor in the sale of

books. GEON materials may be brilliantly—or delicately—colored . . . Many valuable book covers have been destroyed by mildew. GEON will be unaffected by mildew—discoloration will wash right off.

These and other properties of GEON—resistance to chemicals, foods, heat, cold, light and many other destructive elements, may be had in an almost limitless variety of *planned* combinations. GEON may be made into a wide variety of forms, too—coatings for fabric and paper; flexible sheet or film for packaging materials; brief cases, upholstery; flexible or rigid extrusions and molded goods for innumerable applications. Probably you can suggest additional applications for these truly versatile raw materials.

For more complete information about GEON polyvinyl materials, write Department LL-4, Chemical Division, The B. F. Goodrich Company, 324 Rose Building, Cleveland 15, Ohio.



**CHEMICAL DIVISION
The B. F. Goodrich Company**

324 ROSE BUILDING • CLEVELAND 15, OHIO

APRIL • 1945

All the "bugs" are out of these Packages

"Set is protected against contamination"

That's what it says on these packages for Army blood transfusion sets used in the front lines.

Think what it means: The package has kept the contents sterile from packer to battlefield user. No air, moisture or other medium of contamination has reached the contents.

Interesting packages to contemplate if you have a product that requires *complete* protection against air, water, moisture-vapor, or other harmful things that can't penetrate Alcoa Aluminum.

We shall be glad to work with you in fitting Alcoa Aluminum . . . in the form of foil, semi-rigid containers, or other type of package . . . to your own particular needs.

ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.



Army blood transfusion sets, both donor and recipient, are kept sterile in two types of aluminum packages. Top, a pouch of Alcoa Aluminum Foil laminated with heavy glassine with a heat-sealed coating at the edges, as produced by H. D. Cott Corp., Chicago. Bottom, an Alcoa Aluminum semi-rigid container. Assembled and packed by Baxter Laboratories, Inc., Glenview, Ill.

ALCOA

FIRST IN
ALUMINUM



will your products go to market dressed up for business?

When Peace brings markets back to normal, you'll want your products to be "attention-getters," dressed up for business—landslide business—in packages that are functional, smart and inviting.

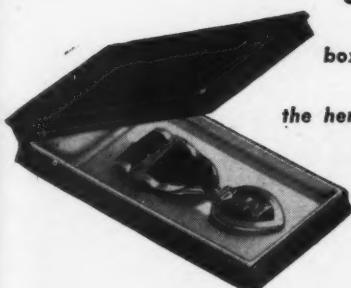
With a unique set-up for producing boxes in a wide range of materials*, Arrow has made packages that have made packaging history.

Right now, with urgent war work, we can't jam production. But we can help you get your box to the point of production. Ideas and know-how ready for your product and problem!

For tomorrow's boxes—
consult Arrow today!

* metal, plastic,
wood, cardboard with
coverings in leather,
fabric, paper.

Arrow enters its fourth year of service in the production of boxes which hold the Purple Heart and many other medals for the heroes in our Armed Forces. And Arrow is proud that, throughout these years, it has maintained consistent leadership in serving this need of our Army and Navy.



Arrow
BOXES AND DISPLAYS

ARROW MANUFACTURING COMPANY, INC., FIFTEENTH AND HUDSON STREETS, HOBOKEN, NEW JERSEY



SELECT YOUR TAPES AND SPECIALTIES FROM OUR COMPLETE LINE:

- GUMMED SEALING TAPE, PLAIN & PRINTED
- "CARPAC" REINFORCED SEALING TAPE
- HEAVY GUMMED KRAFT ● GUMMED CAMBRICS
- "INERWOV" REINFORCED CORRUGATORS TAPE
- "SOLSEAL" WATERPROOF TAPE ● COMBINING
- VENEER GUMMED TAPE ● GUMMED HOLLANDS
- CREASED GUMMED STAY

ASPHALT LAMINATED REINFORCED WATERPROOF WRAPPING PAPER

ATLANTIC GUMMED PAPER CORP.

MANUFACTURERS OF "On-to-Sta" GUMMED PAPERS

PLANT & MAIN OFFICE: ONE MAIN ST., BROOKLYN 1, N. Y.

BRANCH OFFICES: PHILADELPHIA - PITTSBURGH - CHICAGO - BUFFALO - ATLANTA - LOS ANGELES - HAVANA



SALE IN DOUBT!

DESIGN YOUR POSTWAR PACKAGE
TO WIN THIS ALL IMPORTANT
POINT-OF-SELL DECISION . . .

Your package is the key to capturing point-of-sale buying impulses. The ever growing trend to self-service shopping puts consumer appeal at the top of the list of postwar packaging prerequisites. Famous EYE-PETIZED labels, cartons, and wraps—created by "U-S" designers and produced by "U-S" skilled craftsmen—are winning point-of-sale buying decisions for many food products. The merchandising power of food packages with eye and appetite appeal has been definitely proven in many food fields by "U-S" EYE-PETIZED packages. This experience in the creation and production of sales-getting packaging materials is available to you in planning your postwar packages. Call the "U-S" representative near you for consultation on your consumer packaging problems.

**PACKAGING MATERIALS
WITH Shelf-CONFIDENCE**



WRAPS
LABELS
CARTONS

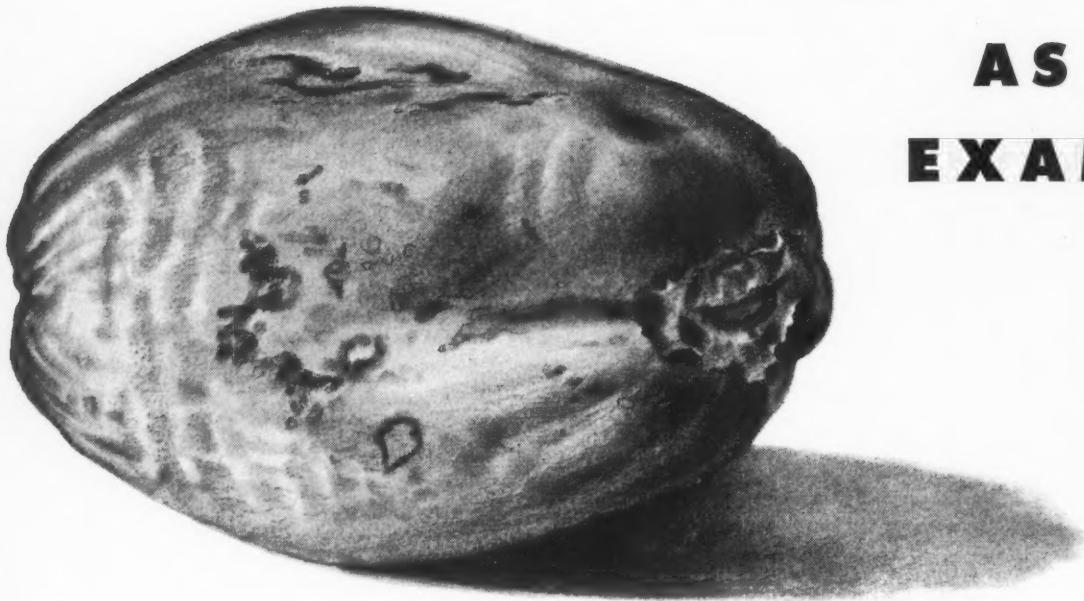
THE UNITED STATES PRINTING & LITHOGRAPH COMPANY
HOME OFFICE: 382 BEECH STREET, CINCINNATI 12, OHIO ★ SALES OFFICES IN PRINCIPAL CITIES
Great "U-S" Plants . . . Producing Highest Quality Packaging and Advertising Materials



TAKE THE

Cocoanut

AS AN
EXAMPLE



NATURE gave every cocoanut its own individual "shipping" container. Inside the cocoanut are the meat and milk that require protection if they are to be of value when they reach the user. The fibrous coating supplied by nature, does this job.

The products of industry likewise must be protected in transit if they are to be useful when they arrive at their destinations. And, following nature's example, the best "results" are obtained only when the "package" grows and develops along with the product itself.

Corrugated fibre boxes are used to protect the thousands of different products of industry.

These products are best protected when packaging engineers work along with you when your products are being designed.

Soon the clouds of war will roll away and the experiences we have gained and the new materials developed will enable our engineers to design better containers for your peace-time products.

INLAND CONTAINER CORPORATION

INLAND
CORRUGATED FIBRE BOXES



INDIANAPOLIS, IND. • MIDDLETOWN, OHIO • EVANSVILLE, IND. • MILWAUKEE, WIS. • DETROIT, MICH.



B is for Blueberries

kept plump, tasty and juice-filled from bush to table in **PLIOFILM** — because it seals moisture *in*!

and Bearings, too



kept rust- and corrosion-free, and ready to roll in **PLIOFILM** — because it seals moisture *out*!

Yes, there are two big reasons why many kinds of fine merchandise will be packaged in **PLIOFILM** after Victory. ★ You see, **PLIOFILM** is the most efficient transparent wrapping material known for keeping moisture in its place — *in*, or *out*. ★ One proof of that is the fact every American military aircraft engine is kept sealed in **PLIOFILM** until used. No other packaging proved equal to this difficult moisture-proofing job. ★ That is why no **PLIOFILM** is now available for normal uses, safeguarding fine foods, drugs, tobaccos and other moisture-sensitive products. ★ But smart manufacturers everywhere are already planning their postwar **PLIOFILM** packages, to bring the public their wares at peak of quality. For information write: Pliofilm Sales Dept., Goodyear, Akron 16, Ohio.

Pliofilm
A PRODUCT OF GOODYEAR RESEARCH



Pliofilm — T. M. The Goodyear Tire & Rubber Company

Famed for extraordinary
in war theaters
FLEXIBLE



protection

all over the world!

PACKAGING

Developed by fabricators to meet specific war conditions in every climate—custom-built FLEXIBLE CONTAINERS are giving added protection to foods, rations, medical supplies, ordnance parts!

"What can *you* do to see that our war supplies get full protection all the way to the front?"

This was the question put, by the Government, to the fabricators of flexible containers.

"These war supplies will travel by ship and train and plane. They'll encounter sudden changes in temperatures—stand for months in warehouses. They'll be hauled by truck and jeep, and on the backs of natives through jungle swamps—

"They'll be tossed overboard from transports and floated in at ebb tide. Parachutes will drop them on land and sea—

"Give us the finest you can in the way of flexible containers—containers that *will protect* these war supplies from air and moisture, from temperature changes, from rough usage, from water and oil, from rust and corrosion!"

» » »

To this Government request, fabricators of flexible containers have responded *all-out*. And their achievement is one of the outstanding stories of the war.

Last year, many millions of pounds of paper were used to make the flexible containers protecting our war supplies. And nearly all these containers were *custom-built* to meet specific war conditions—*custom-built* to do a truly heroic job of protection.

In making these flexible containers, fabricators have had at their command a wide range of materials—glassine, cellophane, metal foil, waxed papers, vegetable parchments, special Kraft papers. These they have used, for the most part, in combination with metal, plastic and synthetic rubber films or coatings.

Naturally, this vast wartime undertaking has opened up new avenues for fabricators—brought about the development of many new and unusual types of flexible containers. These, wherever adaptable, will be available in the peacetime tomorrow.

Member companies of the Flexible Packaging Institute will continue their wartime work for the duration, but if you have a peacetime packaging problem, the Institute will be glad to serve and assist you in every way. Simply write to the address below.



Allied Paper Bag Corporation, Baltimore, Md.
American Bag & Paper Co., Philadelphia, Pa.
The American Paper Goods Co., Kensington, Conn.
Arkell & Smiths, New York, N. Y.
Beier & Company, Chicago, Ill.
Bemis Bros. Bag Co., Indianapolis, Ind.
Benj. C. Betner Co., Devon, Pa.
Alfred Bleyer & Co., Brooklyn, N. Y.
Brown Paper Goods Co., Chicago, Ill.
Capital Envelope Co., Ltd., Los Angeles, Calif.
Central States Paper & Bag Co., St. Louis, Mo.
Central Waxed Paper Company, Chicago, Ill.
Cupples-Hesse Corporation, St. Louis, Missouri
Custom-Made Paper Bag Co., Long Island City, N.Y.
Diaphane Bag Corporation, Philadelphia, Pa.
Dixie Wax Paper Co.,
Memphis, Tenn. and Dallas, Texas
Duplex Coffee Bag Co., Glendale, N. Y.
The Jaite Company, Jaite, Ohio
Kehr Paper Products Co., Philadelphia, Pa.
Kellogg Container Division,
United States Envelope Co., Springfield, Mass.
Kennedy Car Liner and Bag Company, Inc.,
Shelbyville, Ind.
Marathon Corporation, Menasha, Wis.
Milprint, Inc., Milwaukee, Wis.
Monoca Bag & Mfg. Co., Inc., Toledo, Ohio
Moser Bag & Paper Company, Cleveland, Ohio
Oneida Paper Products, Inc., New York, N. Y.
Orchard Paper Company, St. Louis, Mo.
Paramount Paper Products Co., Inc.,
Philadelphia, Pa.
Thomas M. Royal & Co., Philadelphia, Pa.
C. E. Stevens Bros. Inc., Baltimore, Md.
Union Bag & Paper Corporation, New York, N. Y.
Western Paper Converting Co., Salem, Oregon

FLEXIBLE PACKAGING INSTITUTE

369 Lexington Avenue

» » »

New York 17, N. Y.



To watch weather at work . . .

In Navy pre-flight, the hell-bent hot pilot gets so much study, fresh air and exercise so simultaneously, he can always use a little shut-eye . . . has been known to doze lightly in dull classes. Aerology (BuAir for meteorology) as conventionally taught, can be very dull. The cadet takes a dim view of the definitions and loopy lines over maps; crams for the exam, then dismisses the subject from his burdened brain.

A year later, over uncouth terrain or an uncomfortable lot of water, he meets weather in the raw instead of reports; watches an ugly cloud backfield do T formations, bounces around until his teeth ache . . . and wishes to hell he could remember what it was the man said!

To make the action of weather more understandable, Navy BuAir enlarged a section of a weather

map and painted the stages of a storm on upright pieces of glass. Somebody said it would be nice if students could take away more than a fugitive memory of the map . . . So they came to Einson-Freeman.

The subject instantly suggested the child's pop-up book, of which we have often been parent in the past. Three separate charts were developed, size 9 x 10½ inches. As the cover is opened, a series of vertical vanes stand up. Each vane illustrates and diagrams a storm stage. The series depict the start, development and decline of a warm front, cold front and cyclonic storm over an area eight hundred miles wide and a thousand miles ahead.

By noting wind direction, and comparing cloud formations with the drawings on the vanes, the pilot can tell if he is approaching or within a storm area, identify the

type, and act accordingly. Covers carry standard information and flight directions. These charts save worry, gas, structural strain, may save schedules, planes, lives . . . After looking them over, Army Air Forces adopted these devices, too.

THE Armed Forces have found out that for efficiency and security, training is a non-stop operation, and instruction must be continuous. Peacetime business can adopt the same principle to its profit. And Einson-Freeman's unique current experience in making training aids for the Armed Forces—will make training programs, educational courses, saleswork and advertising more effective, quicker, cheaper.

Demonstrations on request.

NOTE: We are permitted to sell these Aerology Charts to civilians—\$3.75 for the set of three, with instructions.

Einson-Freeman Co., INC., • PRIMER PROUD LITHOGRAPHERS

STARR & BORDEN AVENUES, LONG ISLAND CITY, NEW YORK



Fifty million packagers CAN BE WRONG !

Volume Production Cuts Cost but adds Nothing to a Package's "SALES APPEAL"

NATIONAL merchandisers who use Ritchie's low cost, volume-production facilities, select Ritchie from among the very few firms who can handle large-quantity orders. *Not alone for quantity and low cost—but for the KIND of packages that Ritchie makes.*

Because—Ritchie builds only ONE kind of package—the kind that helps a product SELL!

WAY TO A BETTER PACKAGE

The Ritchie way integrates art and artisanship—to give you a better package at a low unit cost. A package that quickly, unmistakably identifies, fully protects and conveniently dispenses your product. A practical, production-planned package—easy to fill or pack, easy to handle, to stack and display—but *above all* designed for eye-appeal, for quality-impression, for *beauty that sells!*

THE 5 ESSENTIALS OF A SELLING PACKAGE

- 1 It must be practical, production-planned, economical to manufacture, and conveniently dispense the product.
- 2 It must fully protect
- 3 It must be easy to handle, to stack and display.
- 4 It must proclaim the quality and identity of your product.
- 5 It must be notably "good looking," memorable, ATTRACTIVE!

W. C. *Ritchie* and COMPANY

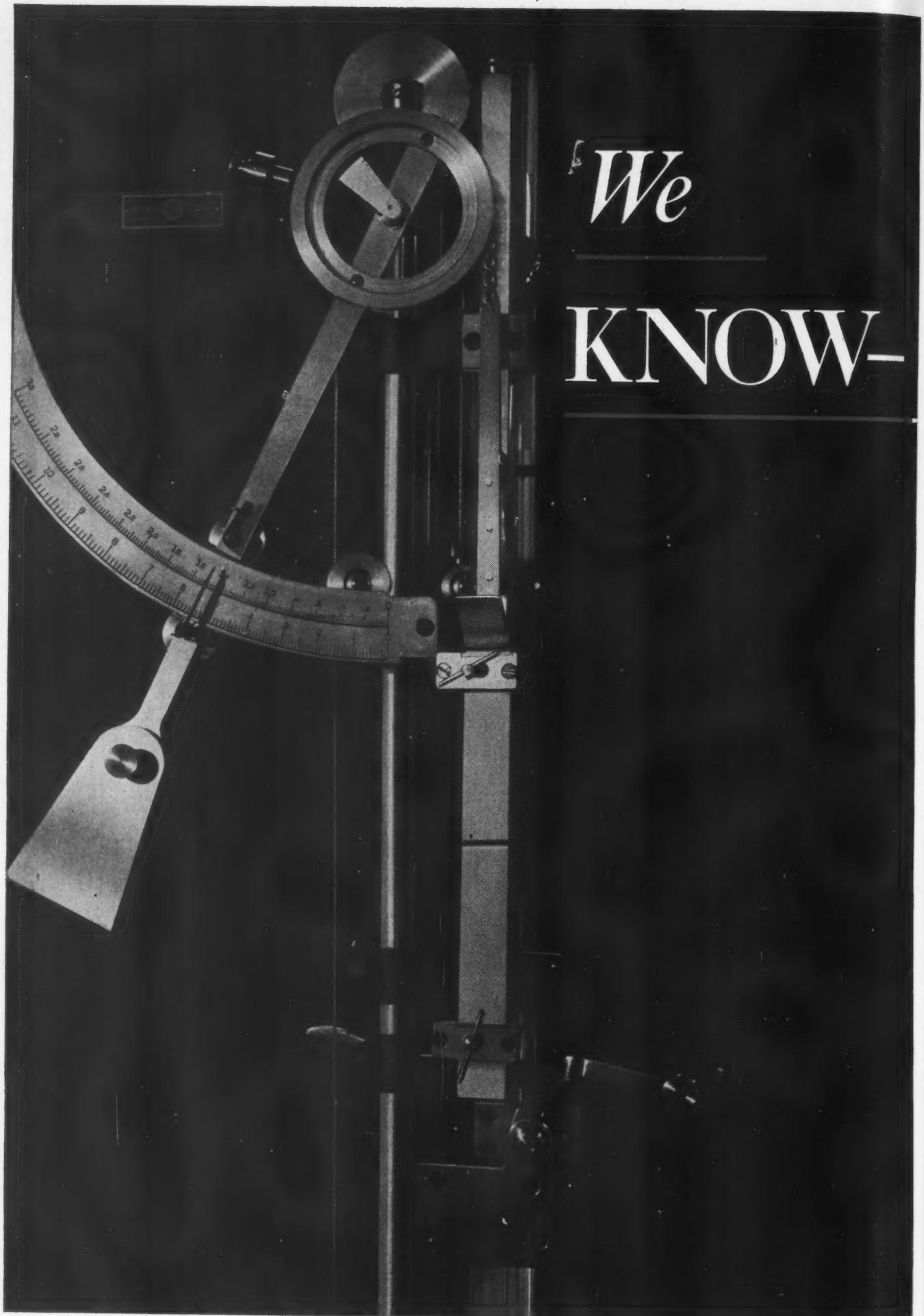
8843 Baltimore Avenue • Chicago 17

Set-Up Paper Boxes • Fibre Cans • Transparent Packages

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS

APRIL • 1945

17



how our trained seals

will perform!

The first requirement in a package seal is that it shall be a perfect seal.

The second—that it tests to the strength which meets the packaging requirement.

This machine, in Reynolds Laboratory, tests the strength of every package seal before it is approved for production.

There are twelve highly specialized departments in Reynolds completely equipped, modern packaging laboratory . . . dedicated now to the single aim of developing better packaging for the shipment of the matériel of War.

The needs of war have brought about packaging miracles! Undreamed of improvements have been made in the rolling, laminating and sealing of foil materials.

If you are interested in knowing how these new developments can help you deliver your products to the public in better condition and with greater sales appeal than ever before, Reynolds technicians will be glad to help you.

For 25 years Reynolds have been the world's largest producers of foil!

Address inquiries to—Reynolds Metals Company, Reynolds Metals Building, Richmond, Virginia.

Reynolds Metals Company



Leads the way in Foil Packaging



Who wouldn't like the joy of hunting?

However, business comes first; pleasure last, is the well-known maxim.

With postwar competition promising to be keener than ever before, many of us face the fact that *now* is the time to consider our methods, our packaging appeal, our operation to assure superior products in every way.

We believe we can help you

We have developed improvements in methods of processing and packing. Our engineering and research staffs may point the way to lower cost production for you as they have for other manufacturers. There is no charge for this service.

Our experience these past forty years has resulted in many ingenious containers for Uncle Sam and American manufacturers. Perhaps, working closely with you, we may develop some profitable postwar merchandising plans for you. All this is part of our service to customers.

Why not take advantage of this offer? Call our local representative, or our main office.

CANCO

AMERICAN CAN COMPANY

230 Park Avenue, New York 17, N. Y.

MODEL **JN**

4 Station Automatic

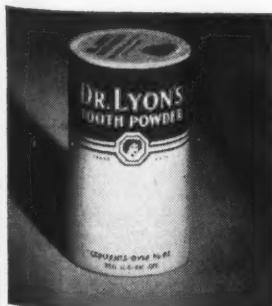
VOLUME FILLER
VOLUME PACKER
GROSS WEIGHER



...for all types of powdered, granular and paste materials

The new Model JN is unique in that it will pack, or pack and weigh, automatically. It can be adjusted for controlled pressure—the machine can be adapted easily to suit the size and type of container required, and the material handled.

The many new automatic features, plus the speed and accuracy of the JN, soon pay for the machine through savings on labor costs alone. It will pay to get full details and specifications—there are many features never available before—write today!



Filled and packed on the Model JN at a speed of 120 per minute, with an accuracy within $\frac{1}{8}$ ounce.



Send U.S. details on any of your packaging problems—we have the machines and the engineering background to help solve them.

Automatic Box Machinery Co. Inc.

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

I can see
more postwar jobs
in our plant... in



Line more effective folding carton

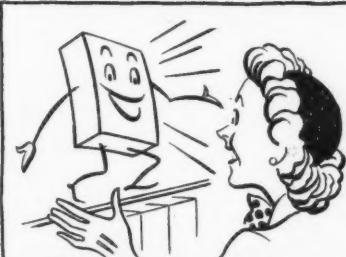
And Now's the time to Let Gardner-Richardson Help You Get That New
Folding Carton Under Way . . . a Package That Will Stimulate Impulse Buying, do a Better
Selling Job in Tomorrow's Mass Displays . . . Make More Jobs in Your Plant



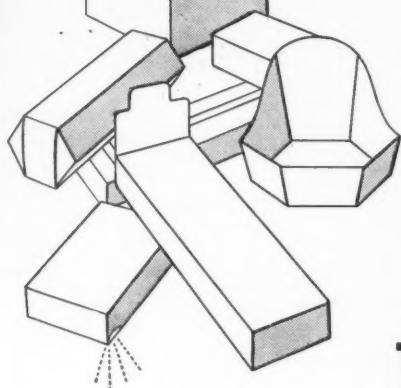
TOMORROW, MONEY WON'T BE BURNING a hole in pockets as it is, today. The optimists forget that Mom will be back in the kitchen where she gets no pay check. That Sis will be handling a vacuum sweeper instead of a welder's torch. To loosen their dollars will take some prying . . .



WHAT'S MORE, THERE'LL BE hundreds of products, new and old, competing on the nation's shelves for those dollars. To get your share . . . to keep your people busy . . . you'll want a folding carton that speaks out for you, does a real selling job.



YOU'LL WANT AN ECONOMICAL PACKAGE that grabs eyes, whets the buying appetite, says, "I'm the one to take home." You'll want a carton that says, "Look—I'm easy and convenient to handle, practical to use." And the time to start developing the carton to give you that sales advantage is right now.



GET THE JUMP ON COMPETITION. Be ready with that improved package. Turn the technical and merchandising know-how of Gardner-Richardson specialists loose on your problem. Let them show you what can be done to step up visibility in open displays, increase shelf salesmanship. Perhaps they can show you how to make your carton more convenient to use, give it a better opening or closure, suggest a better unit size. Let them prove to you that Gardner-Richardson's rigid specifications for paper, ink, plates, dies and printing assure economy-mass-produced cartons that are outstandingly uniform, colorful, crisp . . . better performing in high-speed filling machines. Write, today. Outline your needs. No obligation, of course.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

Include

CAPEM

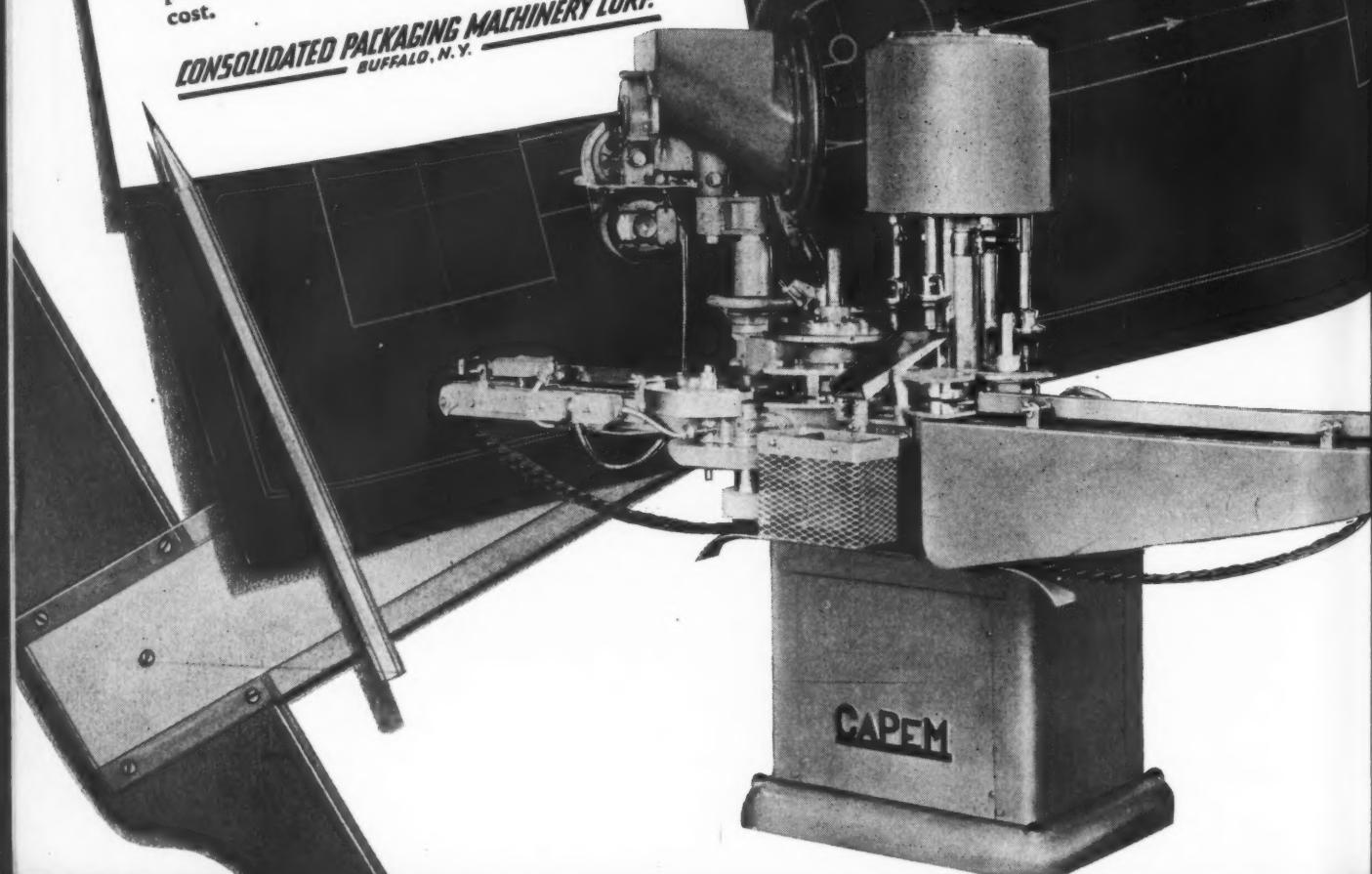
IN YOUR POST-WAR PLANS!

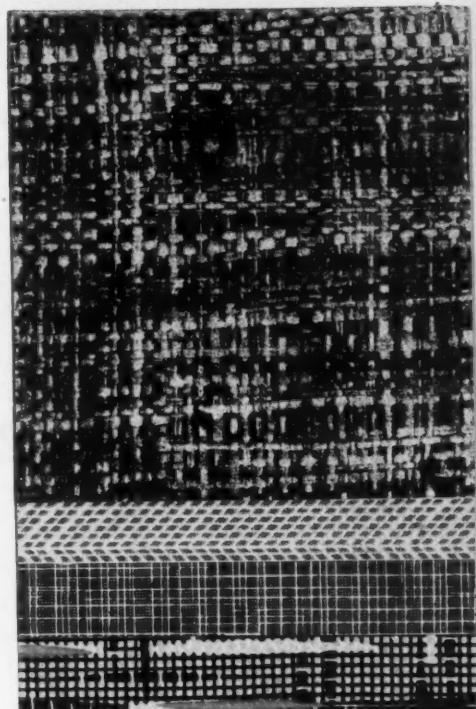
Post war packaging will benefit greatly from machines and methods developed to meet war-time needs. Right now alert manufacturers are evaluating these developments in relation to their own packaging problems.

CAPEM Screw Capping Machines, until now largely devoted to speeding production of ammunition for war, are once more taking their place as leaders in the sealing of all types of bottles, jars and cans. Handling containers of any size or shape, CAPEM applies all types of screw caps automatically and at high speed.

Its automatic features and great flexibility make it easy to fit CAPEM into any packaging line. It eliminates inspection yet guarantees a leak-proof seal. And the installation of CAPEM invariably results in increased production and important savings in labor cost.

CONSOLIDATED PACKAGING MACHINERY CORP.
BUFFALO, N.Y.





"WEAVE-TEX" textures have a real consumer appeal. They simulate familiar textiles. They offer attractive colors. They feel different to the touch.

KUPFER'S "WEAVE-TEX", of which four small samples are here presented, are a series of interesting, exciting package wraps.

Send for working size samples.

Naturally quantities are limited by the current paper shortage.

KUPFER BROS. CO.

Manufacturers of Surface Coated Papers

4 ASTOR PLACE, NEW YORK 3, N. Y.

Est. 1845

BOSTON • RICHMOND • PHILADELPHIA

KUPFER BROS. PAPER CO.
145 WEST HUBBARD STREET
CHICAGO 10, ILLINOIS

Authorized Representation:
MODERN PACKAGINGS
IRWIN-KEASLER BLDG., DALLAS 1, TEXAS

TWO IMPORTANT *Solvent Type* *Machine Coatings*

#336—FOIL HEAT-SEALER:

This special coating has unusually tenacious adhesion to aluminum foil and lead foil. It heat-seals quickly, forming a non-strip bond.

#803F—GLOSS COATING:

A TRULY MIRROR LIKE FINISH

Very high solid content limits penetration, keeps bulk of material on surface. Has appearance of lamination when applied over printed material.

〔Used widely by the most discriminating packagers〕

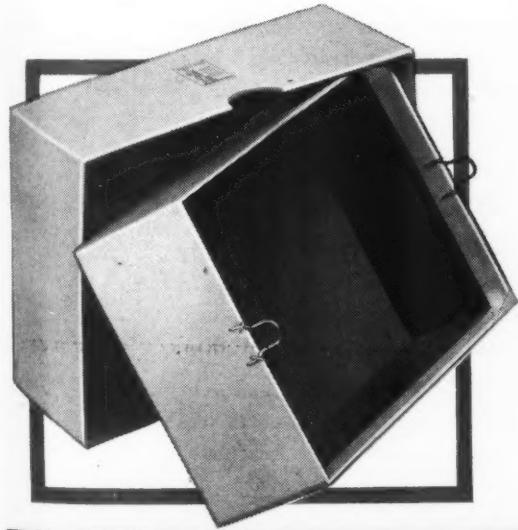
FLOOD & CONKLIN MFG. CO.

Coatings of Scientific Reliability

NEWARK 5 • NEW JERSEY



NOW UNCLE ZEKE IS "HEP" TO HEARING!



Millions of Americans formerly handicapped by impaired hearing now are being thrilled by sounds they thought were fading from their lives. Today, inconspicuous yet scientifically-perfected devices are performing miracles by restoring to the afflicted, their priceless auditory sense. Many manufacturers of efficient hearing aids rely on rugged, light-weight Mason Mailmasters to safeguard their delicate instruments from plant to purchaser. If you manufacture small products or parts, investigate the advantages of the Mason Mailmaster—the ideal container for domestic or overseas shipment.

The **MASON BOX COMPANY**
ATTLEBORO FALLS, MASS.—175 5TH. AVE., NEW YORK

PRESENTING

WARNERCRAFT TEKWOOD*
for Post-War Packaging

WHAT IS IT?

One of the many packaging improvements designed and developed by experienced Warnercraftsmen for post-war use, Warnercraft Tekwood* is a wood laminated with fiber material. Light in weight as cardboard yet many times as strong, it is suitable and practicable for containers from jewel-box to suitcase size.

WHAT WILL IT DO FOR YOU?

Tekwood* is adaptable to any type of covering making it possible to design attractive, eye-appealing boxes that may be re-used long after the original contents are exhausted. Its strength and lightness mean easy and safe shipping for your goods . . . and, because it can be produced by mass production, manufacturing costs are low yet the finished box is tops in quality.

Constantly in touch with the newest in design and materials, Warners are ready now to design the package to fit your needs . . . to complement tomorrow's finest products.

*REG. U.S. PAT. OFF.

WARNERCRAFT



Smooth...

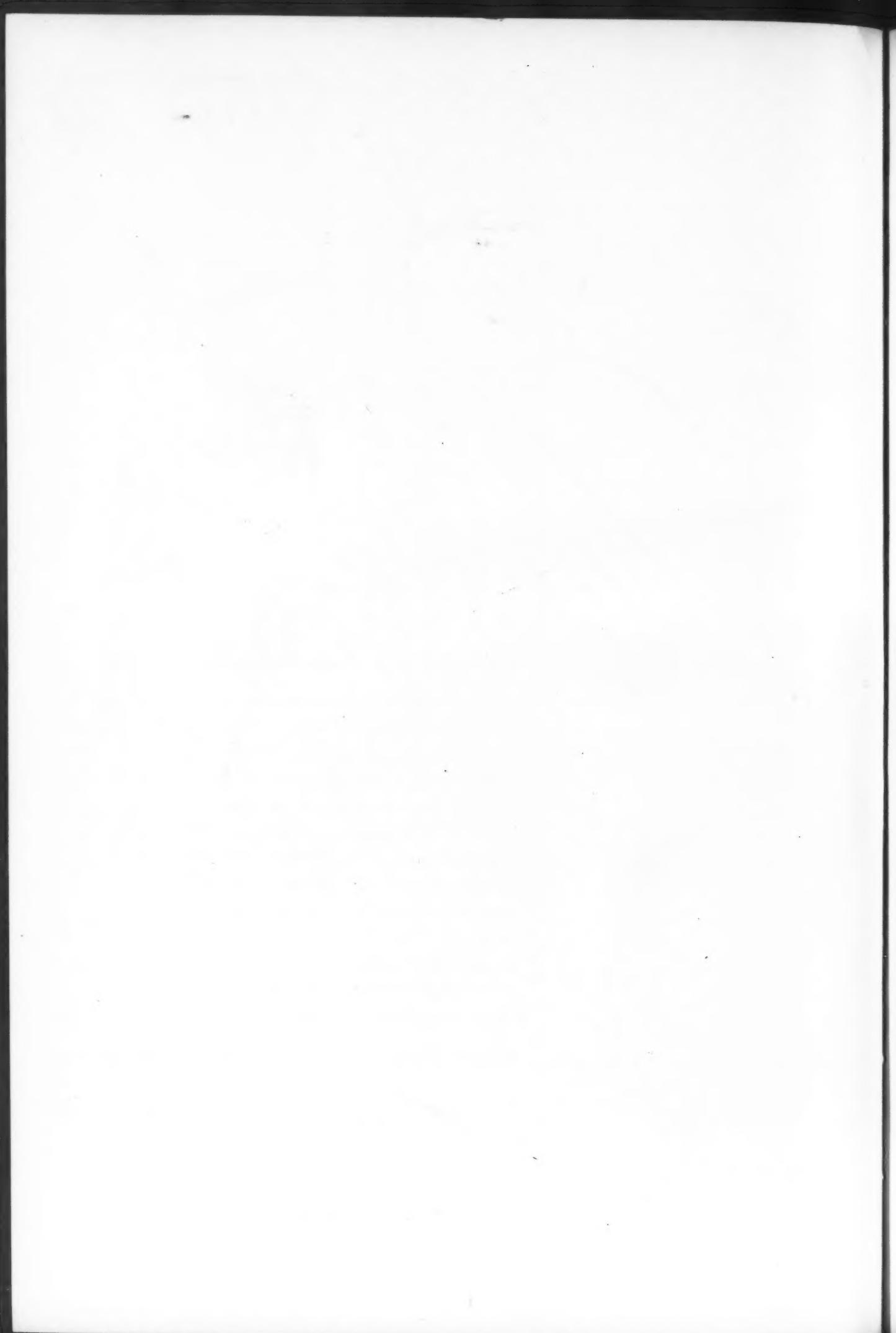
CHAMPION Kromekote*

Fast and smooth as a man on skis, beautiful packages of Kromekote glide into everyone's consciousness. This exclusive, patented, high gloss paper provides the glorious setting for jewelry, perfumes, candies, stationery, food, beverages, cosmetics, gifts, and other fine merchandise. Although production is now limited by wartime conditions, the output of Champion Kromekote will be increased as soon as possible to take care of the ever-increasing demand for better packages for better sales.

The Champion Paper and Fibre Company • Hamilton, Ohio



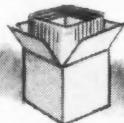
*Kromekote is the registered trade-mark of The Champion Paper and Fibre Company's cast coated high finish paper.



MEHL CELLOPHANE BAGS

Protect what they show

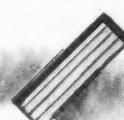
OTHER MEHL BAGS



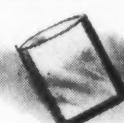
Pressure Seal Liners



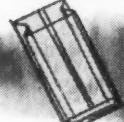
V-Type Liners



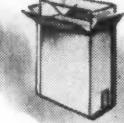
Grade C Pouches



Foil Pouches



Paper Grade A Bags



Specialty Bags



TODAY—millions of *quality-made* Mehl Cellophane Bags are on duty in war packaging—safeguarding ration components . . . medical supplies . . . small metal parts . . . and other needs en route to our fighting men. Just as they are successfully filling the requirements of an ever-increasing variety of essential packaging today—*quality-made* MEHL Cellophane Bags will provide the merchandising advantage of “eye-appeal” with proved protection for hundreds of civilian and industrial products tomorrow. Mehl Cellophane Bags are now “in the service”—but keep them in mind for the modern visible packaging of your product after the duration.

Mehl

MANUFACTURING CO.

Division Sydney-Thomas Corp.

2351 FERGUSON RD.

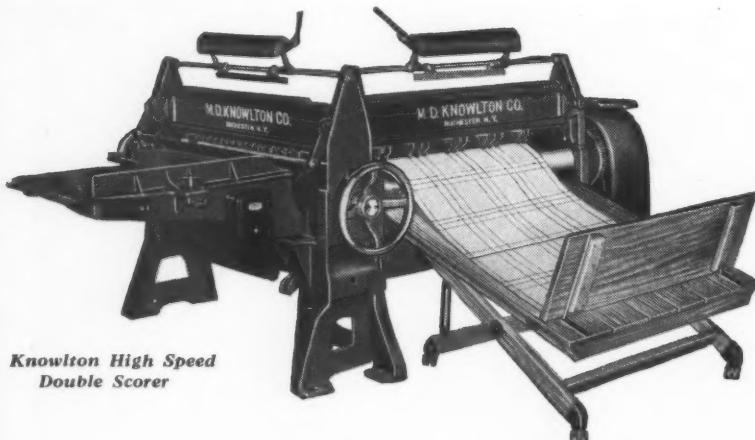
• CINCINNATI 5, OHIO

277 Broadway
New York 7, N. Y.

Western Package Products Co.
1807 E. Olympic, Los Angeles 21, Cal.

Speedy Precision Scoring

Knowlton



Knowlton High Speed
Double Scorer

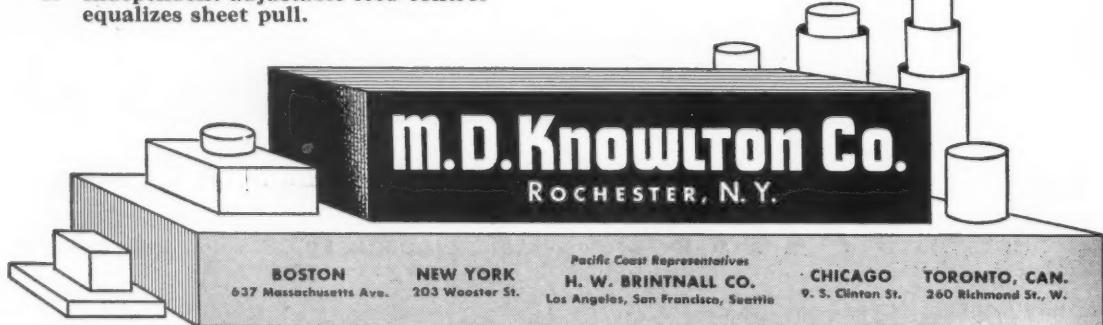
Three superior features of the Knowlton High Speed Double Scorer insure accuracy and absolute uniform depth of scoring:

1. Weights have been distributed by the excellent design of the rugged base and extra-heavy reversible knife bars.
2. Large 9" diameter scoring rolls, with their trunnions (shafts) cast integral, are set in Timken Roller Bearings.
3. Independent adjustable feed control equalizes sheet pull.

WHEN SPEED and accuracy are paramount, the Knowlton High Speed Double Scorer outperforms all others. This Knowlton machine is ruggedly constructed and incorporates the newest engineering and mechanical developments to produce highest production at lowest cost.



Request our Bulletin No. 94 which explains why you can't afford to overlook the improved production and low operating cost features of this precision machine.



BOSTON

637 Massachusetts Ave. NEW YORK

203 Wooster St.

Pacific Coast Representatives
H. W. BRINTNALL CO.
Los Angeles, San Francisco, Seattle

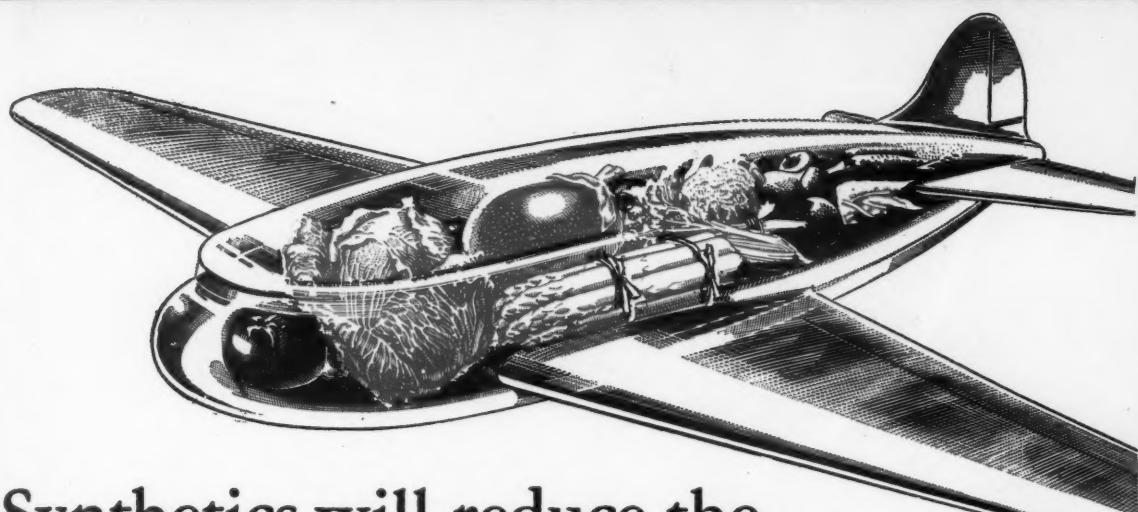
CHICAGO

9. S. Clinton St. TORONTO, CAN.

260 Richmond St., W.

Future Ideas for Food Packaging

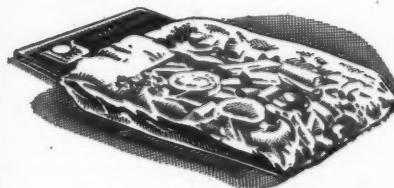
... a reprint of a current message of Celanese Plastics Corporation appearing in general magazines and newspapers.



Synthetics will reduce the high cost of spoilage in tomorrow's foods

IMPROVEMENTS LIKE THIS in the distribution of food will be accepted practice after the war:

Crisp salad greens and tender vegetables will be picked and prepared ready-to-use in the areas where grown and rushed by air to city markets. You'll get them from your dealer garden-fresh and succulent—for they'll be sealed in bags of transparent Lumarith*, a Celanese* plastic. Sea-fresh lobsters and oysters will be flown to interior cities protected by the same efficient wrapping. Choice cuts of meats will be wrapped in Lumarith.



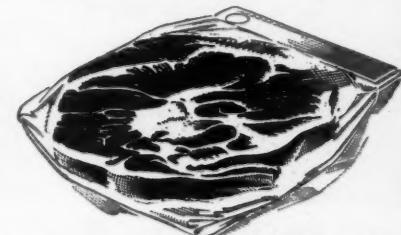
Lumarith has many advantages for bringing perishable foods to market. It's not only strong but light in weight—a particular advantage when shipping by air. More important still—it is water-proof. Even dew-sprinkled vegetables, such as lettuce and spinach, can be sealed in Lumarith—unlike

*Reg. U. S. Pat. Off.

many transparent wrappings, it is unaffected by either moisture or natural vegetable juices. And Lumarith is grease-proof, fungi and mildew proof...advantages that have long recommended it to packers of dried fruits and smoked meats.

The sale and handling of choice, fresh fruits can also benefit from Lumarith. When avocado pears, for example, are wrapped in Lumarith, the rate of ripening can be controlled. The dealer unwraps only fruit for immediate sale, but punctures the wraps of additional pears soon to be needed, which will cause them to ripen slowly. Many kinds of fruits and melons can be thus protected and controlled, resulting in finer taste and no waste. Weight can also be reduced by cutting off the protective leaves of vegetables such as cauliflower.

Before the war, Lumarith was extensively used by manufacturers of quality window packages because of its grainless transparency, strength and non-aging properties. Lumarith doesn't crack, dry out, discolor and doesn't contract and tend to pull packages out of shape. After the war, more foods than ever will be pre-packaged in



Lumarith window boxes and bags, and in Lumarith lined set-up boxes—ready to take out without waiting for measuring or weighing. Quality will be clearly apparent. Eye appeal will be a valuable aid to mass displays and productive merchandising in super markets and other volume outlets.

Will transparent synthetic packaging reduce the cost of distributing food? Check the many ways it can effect savings and decide for yourself: shipping weight, refrigeration, spoilage, handling, mark-downs . . .

There's a real health angle, too. The fresher the food, the more vitamins it provides. Transparent plastics—for many, many reasons—will be the No. 1 materials for packaging tomorrow's foods. Celanese Plastics Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

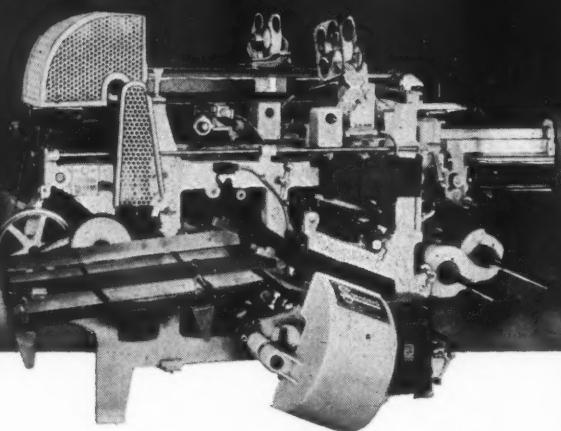
LUMARITH*
A Celanese Plastic

Bags and window bags . . . boxes and window boxes . . . printed and plain wraps—all of them transparent!

from the *Nebulous*

to the *Tangible*

ONE OF AMF'S TANGIBLES—THE CIGARETTE WRAPPER



SOME OF AMF'S MANY TANGIBLES

Cigarette Making Machines

Cigarette Packers

Cigarette Tobacco Leaf Stemmers

Tobacco Weighing & Packing Machines

Necktie Slip Stitching Machines

Ornamental Stitching Machines

Wahlstrom Chucks

Bread Wrapping Machines

Bakery Ovens

Vertical Mixers

Bread Pan Greasers

Pretzel Tying Machines

To create and build tangible machines from nebulous ideas is a task of vital importance to industrial progress. How well American Machine & Foundry Company does this job is evidenced by the number of AMF machines doing a specialized packaging job throughout America. The transition from nebulous to tangible involves a closely coordinated, highly skilled organization backed by a security founded on high standards. AMF represents master engineers working with trained research men. It represents precision construction with durable materials in AMF's own large factories. Important, too, are the thorough laboratory and field tests involved. Machines for every purpose are being designed and built for American industry by these specialists—foremost among these are in the tobacco and bakery equipment fields. Because AMF machine designers are also engineers, business men and economists, they are your guarantee that the machines AMF builds for you will do the job best.

AMF INVITES CONSULTATION ON PACKAGING MACHINERY AND EQUIPMENT PROBLEMS



AMERICAN MACHINE & FOUNDRY CO.

511 FIFTH AVENUE
NEW YORK 17, N.Y.

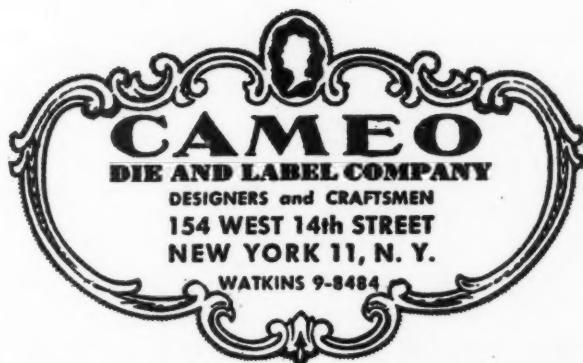


The
**Creative Source for the Finest
Color-Printed Embossed Designs**

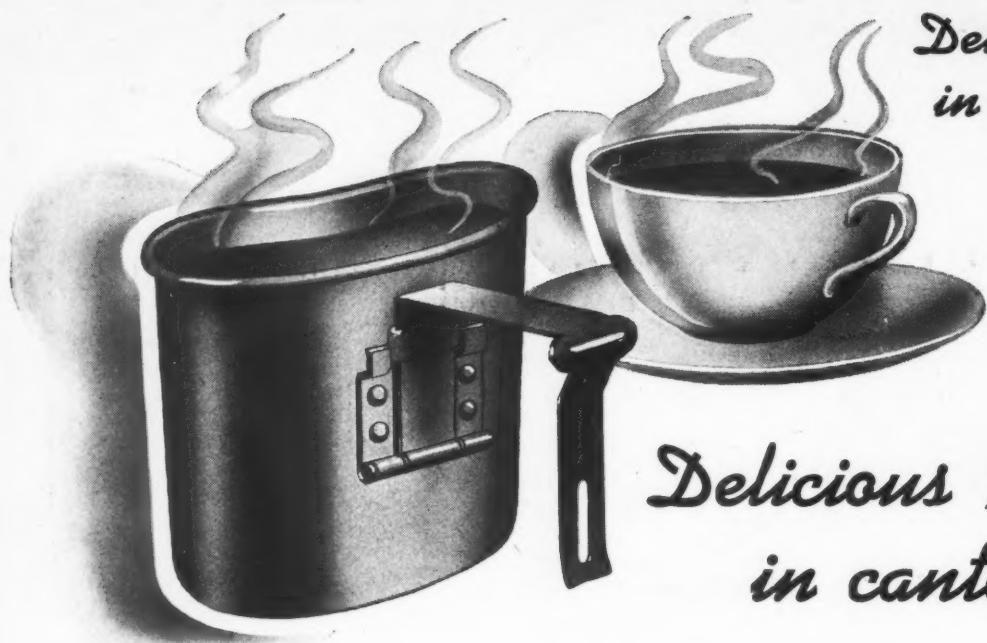
Cameo craftsmanship is a by-word in packaging for the finest two-and three-dimensional designs and reproduction in multi-color.

We work in all available sheet and roll materials to produce distinctive labels, seals, tags, wraps and package decorations.

The sample on this page is only one of hundreds of Cameo productions. Get ready for your postwar competition now by planning for a distinctive Cameo creation!



IN CANADA: CAMEO CRAFTS INC., 157 ST. PAUL STREET, W. MONTREAL 1, QUEBEC.



*Delicious SOON
in bouillon cups!*

*Delicious NOW
in canteen cups!*

...and the deliciousness of both is protected

by metal foil!

YOU bet this steaming hot bouillon hits the spot! In any man's language, it's *good!* And its unbeatable, delicious flavor is protected by the little Trans-Pac metal foil package that carries it overseas and right up to the front lines. These compact little packages do their war job admirably well—protecting the precious bouillon powder from heat, moisture, germs—keeping it safely edible up till the minute it's opened for "chow".

Whether it's metal foil or any one of many other superior packaging materials, Trans-Pac can plan your packaging needs now. In addition to our own staff, we work closely with the engineering and research divisions of the leading manufacturers of packaging supplies.

Our long experience dealing with diversified products enables us to turn out the best in present-day packaging. Post-war packaging plans can take shape, however, only as soon as facilities are available. Before then, though, we should be pleased to consult with you on your particular packaging needs.

**TRANS-PAC SERVICES, INC.
PACKAGES PRODUCTS
for the following organizations:**

EASTMAN KODAK CO.
CAMPBELL'S SOUP CO.
J. C. ENO, INC.
BLOCK DRUG CO., INC.
CHEF BOY-AR-DEE INC.
FOSTER MILBURN CO.
THE NORWICH PHARMACAL CO.
LEADER NOVELTY CANDY CO., INC.
GENERAL MILLS, INC.
C. J. VAN HOUTEN & ZONN, INC.
THE ANACIN CO. "WHITEHALL"
CARTER PRODUCTS, INC.
BREAKSTONE BROS., INC.
MARLON CONFECTIONS CO.
JOHNSON & JOHNSON INTERNATIONAL
WALLACE & TIERNAN CO., INC.
THE KNOX CO.

TRANS-PAC SERVICES, INC.

602 WEST 52ND STREET, NEW YORK 19, N. Y.



*Idea for
tomorrow...*

**She'll bring home
YOUR groceries
—when DOBECKMUN
creates your packages**

When a housewife buys groceries, she instinctively reaches for the *transparent* packages. That's because she can see what she's getting. Products packaged in transparent film *sell* better because they *tell* better.

The right package with the right selling idea is a winning combination. Our creative department develops the type best suited to your products, pre-tested when necessary, to assure full protection. Then we process it with attractive multicolor printing to give you a package that dealers and users will like—and buy.

Ask for suggestions now, so that when military needs are met, you'll have a package that *sells* better because it *tells* better.

**DOBECKMUN
PACKAGING SPECIALTIES**

Cellophane bags — ounces to gallons; printed or plain; single or duplex; flats, squares or satchels.

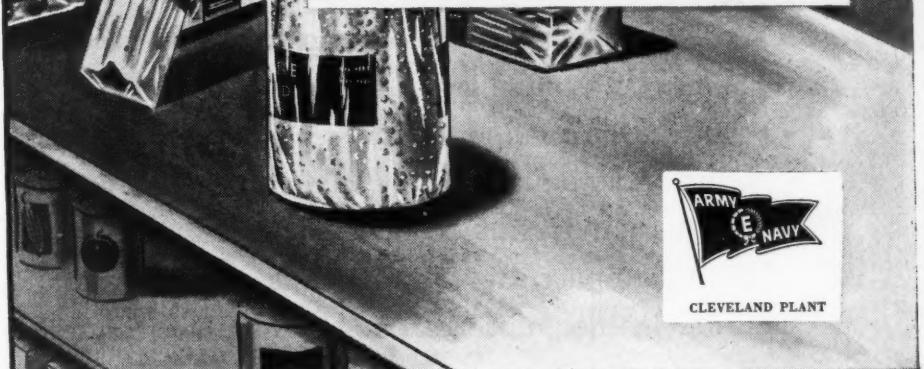
"Tritect" cellophane — wax-laminated film for extra protection, in rolls, sheets or bags.

"Metalam" — heat-sealing aluminum foil laminated to tough film, for continuous, positive protection.

Printed films and foils — in sheets and rolls.

Design and testing — the right combination of material, shape and design for protection, attractiveness and utility; laboratory tested to insure the right answer in advance.

"Tritect" and **"Metalam"** are trademarks of The Dobeckmum Company.



CONVERTERS • PRINTERS • LAMINATORS OF FILMS AND FOILS

THE **DOBECKMUN** COMPANY

CLEVELAND 13, OHIO

WESTERN SALES HEADQUARTERS • SAN FRANCISCO 4, CALIF.
OFFICES IN NEW YORK • BOSTON • PHILADELPHIA • CHICAGO AND LOS ANGELES
REPRESENTATIVES EVERYWHERE



The insignia for the newly-created "5-star generals" is located $\frac{1}{8}$ " from shoulder seam on the shoulder loop. Five silver stars, each star $\frac{3}{8}$ " in diameter, are fastened together in a circle with inner points touching so as to form a pentagon in center. The surface of stars is plain, slightly raised and rounded. One half of distance between shoulder button and 5-star insignia the Coat of Arms is worn.

PAPER IS A 5-STAR GENERAL *in the production of war supplies*

As a part of the paper industry, Atlanta Paper Company takes great pride in sharing a real responsibility of war work. APACO V 3 C weatherproof overseas containers, APACO corrugated shipping cases, Belsinger textile cases and APACO folding cartons—are all proving themselves invulnerable convoys for necessary supplies of food, medicines, ammunition and clothing . . . getting these vital supplies to every front dry, intact and ready for action. Many other vital needs are being supplied by APACO paper products. Equally great pride in the future of our country has inspired APACO engineers to plan your civilian packaging for the business needs of tomorrow.



ATLANTA PAPER COMPANY
Atlanta
Established 1868

Melmac

the double duty plastic!



For use wherever food must be kept hot or cold until served, the Devine Plastic Food Dishes, designed and made by Devine Foods, Incorporated, Chicago, are a modern and practical product in MELMAC. Dishes and covers nest when empty, stack when full, to conserve space, facilitate handling. Sizes vary to meet food requirements.

Check these "utility" features of MELMAC* that have made it ideal for tableware and food service sets and also make it a perfect plastic material for packaging.

MELMAC is light in weight, hard to break. It is odorless and tasteless, chemically inert. It is pleasant to handle, appealing in color. Its hard surface is resistant to moisture absorption, discoloration, and staining. In short, it affords an ideal

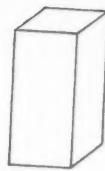
packaging material for the protection of many products.

If you are planning a new package where these properties are of importance, we will be glad to work with you on new designs and new requirements.

*Reg. U. S. Pat. Off.



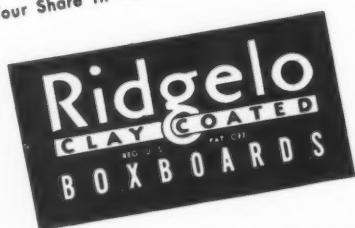
YOUR PRODUCT... the best!
IS YOUR PACKAGE the finest?



It's a short step from a fine product to a carton of Ridgelo Clay Coated Boxboard. Here is a finish that's clean and fresh and bright. It reflects the high quality of any product—accents sparkling ink values.

This is a safe, sure way to protect contents—ready them for easy handling and dominating dealer displays. Slap-dash cartons may cheapen products. Ridgelo Clay Coated Boxboards make good boxes better—a very small investment with substantial returns in good-looks and buyer attraction.

★ Do Your Share in The Waste Paper Campaign ★



MADE AT RIDGEFIELD, N. J.,
BY LOWE PAPER COMPANY

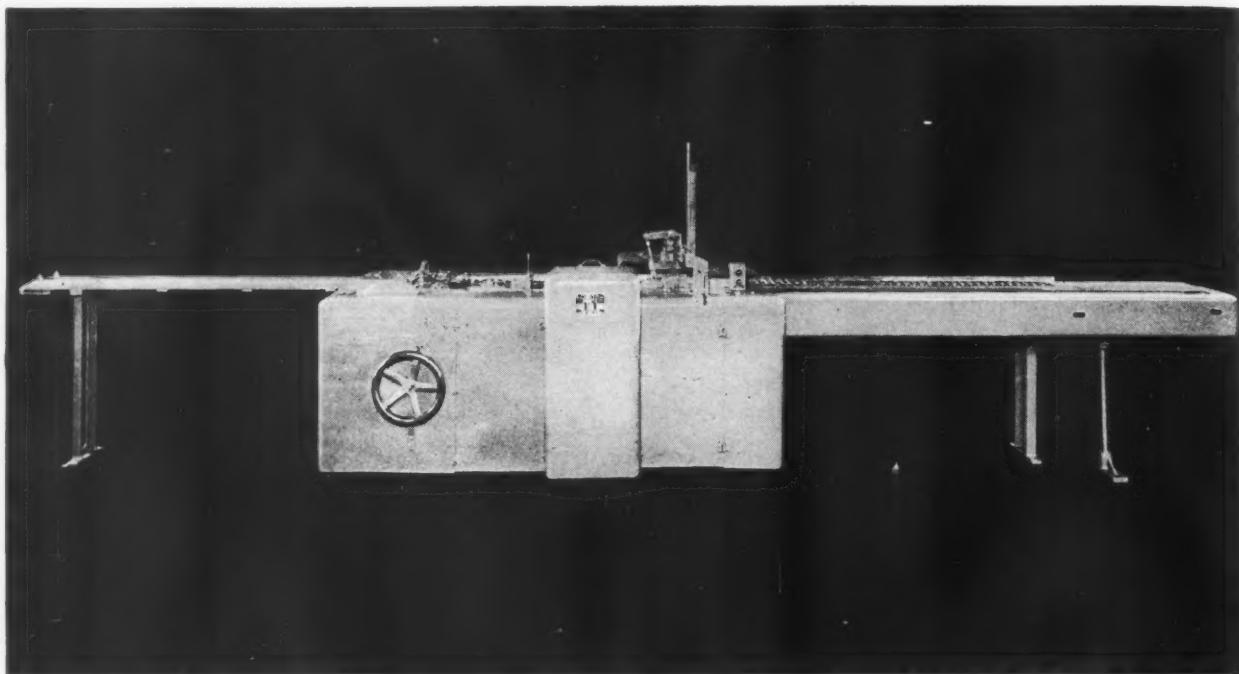
Representatives: Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

Creative Decorators

In the Cosmetic Field the word *Creative* is synonymous with Distinguished "On The Package" Printing. Colorful-Permanent-Integrated . . . this method has been refined by us to the point where it meets the specific needs of Package Decoration. On all surfaces including glass and plastics.

Creative
PRINTMAKERS GROUP
14 WEST 17TH STREET, NEW YORK • CH 3-6803
SURFACE DECORATORS FOR THE PACKAGING FIELD

Marinello



If you want to select the most **PROFITABLE** cartoning machine to package your product, ask these basic questions:

How is the flat carton fed from the magazine and opened?

How is the article loaded into the carton?

How are the flaps tucked or glued?

How are the leaflet, corrugated liner, and other inserts handled?

The answers determine the overall efficiency of the cartoning machine.

Send us samples of your package. We will show you by actual demonstration, picture or blueprint, exactly how we perform these operations. You will see clearly how your product can be cartoned faster, more smoothly, and more profitably with a JONES CONSTANT MOTION CARTONER



R. A. JONES & COMPANY, INC.
P. O. BOX 485

CINCINNATI, OHIO



LIBERATION!

U. S. supplies, packed in paper, aid a reborn Poland. When the demands of war are satisfied, we will be able to show you some startling new and advanced packaging techniques developed in wartime.



CONTAINER CORPORATION OF AMERICA
CHICAGO AND 22 OTHER CITIES



Imagination IS NOW AT WORK FOR YOUR POST WAR PACKAGING

Yes, right now at Marvellum, imagination is at work building castles in the air. Not tenuous, vaporish dream castles, but crystallized idea castles as real as yesterday — as certain as tomorrow.

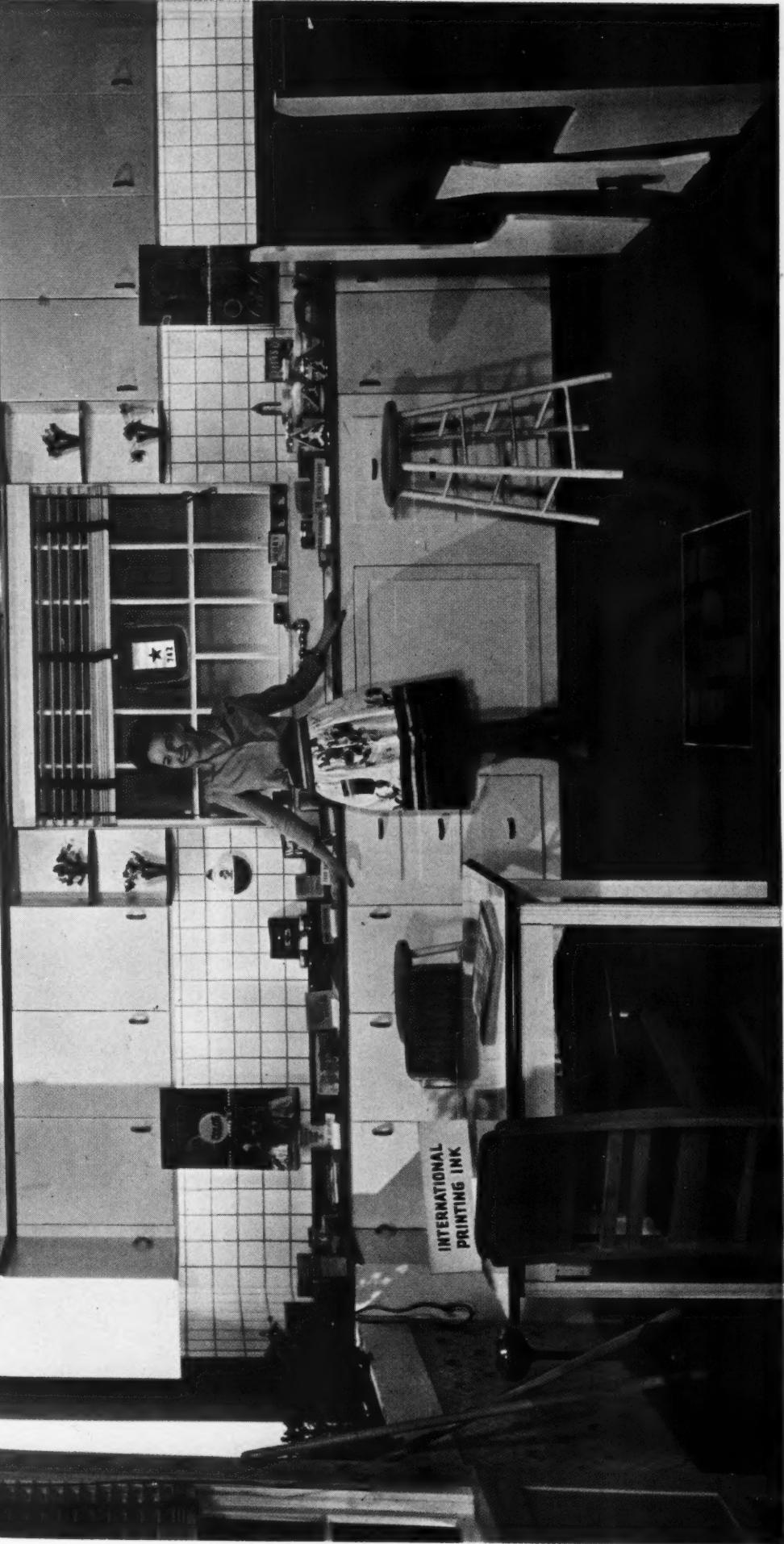
Idea castles that will bring to you — very soon we hope — New Ideas in papers — New Designs in papers — New Materials in papers for your post war packages. Idea castles that will establish more firmly than ever before, the acknowledged leadership of Marvellum in the production of distinctive papers that sell packages.

At this moment our manufacturing facilities are rendering as prompt service to our customers as stocks, material and manpower will allow us. Let us know your requirements.

PAPERS DISTINCTIVE

THE *Marvellum* COMPANY
HOLYOKE MASSACHUSETTS

WARTIME KITCHEN



DISPLAY-IN-PRINT

This is the colorful, informative exhibit which we would have featured at the 1945 Packaging Exposition. We present it in this form to give the members of the industry a glimpse of some of the myriad applications of IPI inks for better printing and finer appearance in all types of packaging.

Our representatives regret that they will not be able to see you and talk to you at the show. As that will not be possible this year, we would like to take another means of showing our interest and friendship. We have prepared a summary of IPI developments in inks for the packaging industry. This summary as well as our comprehensive color guides for offset and letterpress inks is yours for the asking. Why not "Keep In Touch With IPI"?

INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION, 350 FIFTH AVE., NEW YORK 1, N. Y.

MP4
 Offset Color Guide
 Letterpress Color Guide
 Inks for Packaging

Name _____
Company _____
Address _____

Please send me

IT'S WHAT YOU DO WITH CELLULOSE FIBRE THAT COUNTS



No blackout for books

"Of the things which man can do or make here below, by far the most momentous, wonderful, and worthy are the things we call Books!"—CARLYLE

All the glowing tributes paid to books since history began become more significant in wartime.

People see more clearly how vital books are to a free way of life. They realize that, in spite of all paper shortages, the advances of science and the progress of education must be recorded by the printed word. Instruction, entertainment and information must be kept available to all our fighting forces and to the home front.

The book publishers and papermakers of America have met this wartime challenge with noteworthy success. They

have done it by reducing paper weights, narrowing margins, cutting type sizes. They have used every known device and stratagem to save paper.

This year the goal for our fighting forces alone is 85,000,000 books—more than four times the 1943 output for the armed services. This does not include the millions of instruction books used in training.

To help meet wartime needs for many kinds of papers, Oxford has combined continuous research with the experience gained in making more than 1,000 miles of fine printing paper every day. This combination has given us an unusual fund of knowledge to apply to printing problems. And it will prove to be equally useful to all users of fine printing in the fruitful years ahead.



OXFORD
PAPER
COMPANY

230 Park Avenue, New York 17, N.Y.

MILLS at Rumford, Maine
and West Carrollton, Ohio

WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.

STILL
EVERYTHING'S OKAY, JOE! *

— and Joe, don't let all this talk and advertising about post-war products get you down. Of course there are going to be tremendous improvements in post-war living, and post-war design and production must be discussed as one of our ultimate goals, — but discussion is one thing and production is another.

Be sure that here on the home front the only production until the peace is over will be that which will hurry that peace.

Regards
Bill

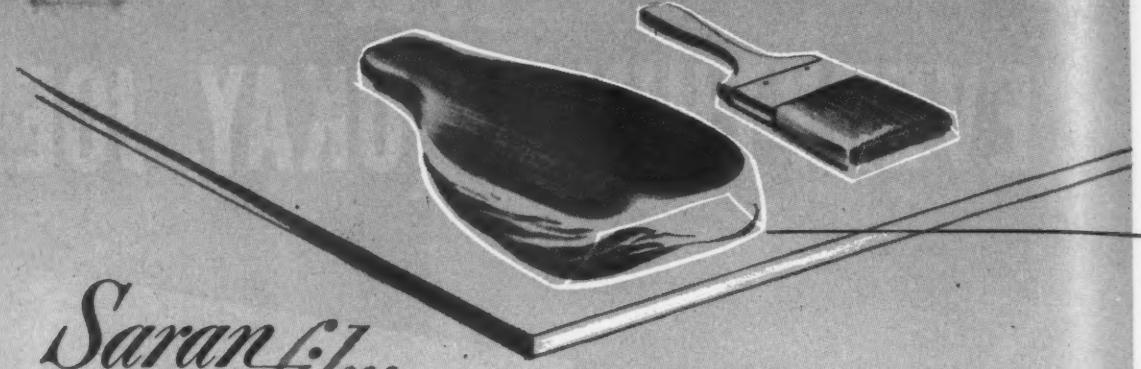
Hazel-Atlas will continue to produce standard lightweight glass containers until food is no longer considered an important war-time weapon.

HAZEL-ATLAS GLASS COMPANY

Wheeling, West Virginia



*This advertisement originally appeared April, 1944.
We are committed to the same policy, until victory



Saranfilm

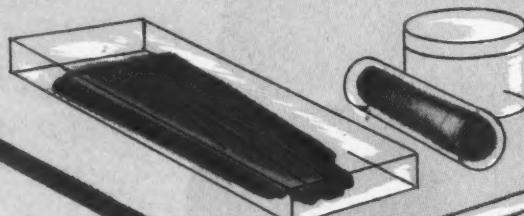
KEEPS MOISTURE IN OR OUT

PRESENT AND POTENTIAL USES:

Dehydrated packages for metal parts, precision instruments, generators, motors, heavy equipment, assemblies, packing corrosive and anhydrous chemicals, bottle closure liners, flexible containers requiring good moisture, vapor, and gas impedance.

PROPERTIES AND ADVANTAGES:

M.V.T. <.20 grams per 100 sq. inches in 24 hours on .225 gauge film. Resistant to most acids, alkalies, greases. Soft, pliable, yet tough and strong: tensile strength, 7-11,000 lbs. per sq. in.; elongation, 20-40%; bursting strength (Mullen), 60 pounds; tear strength (Gms. Elmen-dorf), >30; folding endurance (1 kg. M.I.T.), not less than 500,000. Resistance to heat—up to 125° F. cont.—excellent; up to 175° F. intermittent—good. Resistance to cold -20° F.—good. Tests based on 225 gauge film.



Ethocel Sheeting

RIGID, TRANSPARENT PACKAGING

PRESENT AND POTENTIAL USES:

Containers of all types, sizes and shapes for jewelry, cosmetics, and other products requiring visual display plus protection. Also used for displays, advertising novelties, envelopes, labels, decals, records, electrical insulating tape, ice cube trays, lighting fixture covers, and similar products.

PROPERTIES AND ADVANTAGES:

Combines toughness with flexibility; tensile strength, 10,000 lbs. per sq. in.; elongation, 30%; bursting strength (Mullen), 50 pounds mil; burning rate—slow; water absorption—2.6%. Retains these characteristics and transparency over long periods despite handling. Resistant to alkalies and grease. Withstands heat to 220° F. cont.; to 275° F. inter. Resists cold to -75° F. Easily fabricated by drawing, folding. Can be beaded, printed and joined by adhesives.

packages
that stay
out in front

In the not too distant future, the time will return when the customer is always right. Then, with manufacturers turning handsprings to display their merchandise on dealers' shelves, the packages that stay out in front will be those that combine product *visibility* with product *protection*.

Two outstanding materials, each a leader in its special field of packaging, offer you *both* of these important qualities. Saran Film, soft, pliable and transparent, is noted especially for its imperviousness to moisture*—three times greater than any comparable product.

Ethocel Sheeting, long recognized as one of the finest rigid transparent packaging materials, is durable, clear and heat resistant.** Many a retail customer of tomorrow will be attracted to merchandise packaged in Saran Film or Ethocel Sheeting. Why not investigate these materials now?

THE DOW CHEMICAL COMPANY
Midland, Michigan

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle





Mr. Cellophane Does His Bit!

WHEN WAR CAME, Mr. Cellophane was one of the first to join up. To date he has seen service on all the fighting fronts . . . doing his bit in protecting the food supplies and equipment of our fighting men.

In many cases *special* cellophanes had to be developed by Sylvania to meet packaging conditions never experienced in producing for civilian use. The sketches above show the examples of

only a few of these packaging advances. Many, many more are doing equally important jobs all over the world . . . and still more are in the process of development.

Experience alone enables Sylvania to meet the ever increasing requirements of our armed forces. Only when they are victorious can we turn to our peacetime job of supplying the postwar world with the *better* cellophanes of tomorrow.

SYLVANIA CELLOPHANE

Made only by **SYLVANIA INDUSTRIAL Corporation**

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd St., New York 17, N. Y. ★ Plant and Principal Office: Fredericksburg, Va.





The Maryland Cabinet Square doubles capacity of the medicine cabinet—takes less width, less height. Labels always face front.

Slides in like a book

THE
CABINET SQUARE
by
Maryland
GLASS

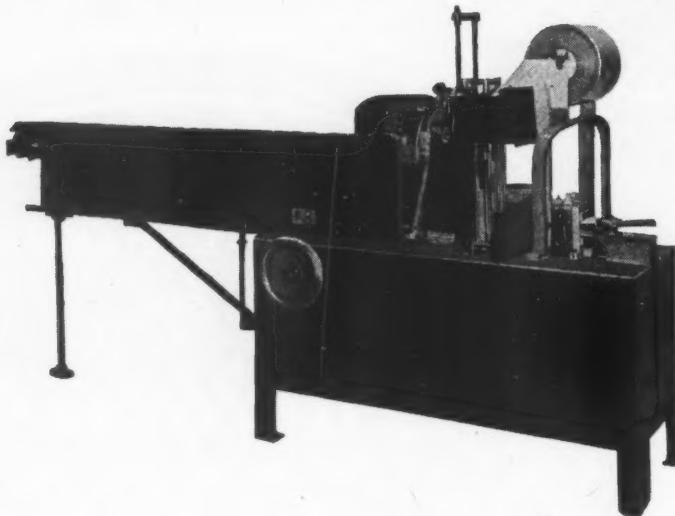


FRENCH SQUARE— $\frac{1}{4}$ oz. to 16 ozs.
CHESAPEAKE OVAL— $\frac{1}{4}$ oz. to 32 ozs.
TOILET OVAL— $\frac{1}{2}$ oz. to 8 ozs.
SQUAT JAR— $\frac{1}{2}$ oz. to 18 ozs.

IN restyling your packages for peacetime competition, consider the production and merchandising features of the Cabinet Square by Maryland Glass. Ideal for a line of related products. $\frac{1}{2}$, 1, 2, $2\frac{1}{2}$, 3, 4, 6, 8, 16 and 32 oz. sizes. Write for sample.

MARYLAND GLASS CORPORATION, BALTIMORE
... 270 Broadway, New York 7 . . . Berman Bros., Inc.,
1501 S. Laflin St., Chicago 8 . . . H. A. Baumstark,
4030 Chouteau Ave., St. Louis 10 . . . J. E. McLaughlin,
401 Lock St., Cincinnati 2 . . . Owens-Illinois Glass Co.,
Pacific Coast Division, 135 Stockton St., San Francisco 19
... Aller Todd, 1224 Union Avenue, Kansas City 7 . . .
S. Walter Scott, 608 McCall Building, Memphis 3.

Your Favorite Peanut Butter Crackers Soon Will Be Wrapped, Sealed & Labeled By Wright's High-Speed Sandwich Wrapper



A group of alert manufacturers have ordered and will receive soon the new Wright's Automatic Hi-Speed Sandwich wrapper.

You'll know when this latest achievement of Wright's "Idea into action staff" is put into actual use. You'll know because your favorite cracker sandwich will appear in a neater, more attractive package. A package which permits visibility on all four sides. You'll know because your favorite cracker sandwich will taste better. The moisture-tight fold seals in goodness and keeps it fresh longer.

Yes, and the manufacturer's accounting department will know, too, merely by taking a

look at the cost sheets. This machine reduces labor costs by as much as 600%; does a better packaging job with 20% less cellophane.

If you are a manufacturer of cracker sandwiches, cookies, fig bars or similar products but for some reason have not investigated this new machine, don't delay another day. Get full details by writing to us, or even better, have your top engineer and sales executive visit our plant in Durham, North Carolina, for a personal inspection. Action now will enable you to get quicker delivery when war conditions permit us to manufacture additional machines.

P. S. To All Manufacturers

What Wright's "Idea into action staff" has done for the cracker sandwich industry is no fluke. Fifty two years of experience and skill went into this job. They're available, too, in meeting the automatic packaging machinery needs your company may require. We cannot promise you an over-night solution. Our plants are up to their neck in war work. But you can save time by permitting us to make a preliminary study now. All correspondence handled in strict confidence.

WRIGHT'S *Automatic* Machinery Company

300 Calvin Street

Durham, North Carolina

"Specialists Since 1893 In Putting Labor Serving Ideas Into Action"

THE *Eyes* HAVE IT



**WHEN THE PACKAGE
IS BY MILPRINT**

Your package's appearance—its ability to draw attention, please the eye and stimulate desire: in a word, to help sell itself—is a factor which cannot be disregarded under modern merchandising conditions. * The creation of such a package is not a fortuitous circumstance but a business,

one in which only experience, specialized ability and the necessary resources can assure success. * This explains in part, why more and more concerns who want the utmost in eye-appeal, as well as convenience and protection, depend on this organization for their packages.

* Sales Offices at • New York
Chicago • Boston • San Francisco
Philadelphia • Grand Rapids
Los Angeles • Cleveland • Dallas
Minneapolis • Cincinnati • Atlanta
Pittsburgh • St. Louis • Indianapolis
Kansas City



TAKE A TIP FROM THE



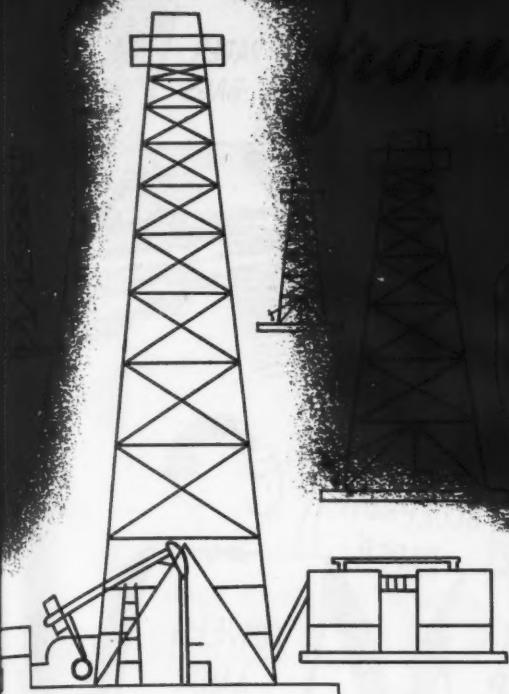
Easter BUNNY!

GLORIFY YOUR
POST-WAR PRODUCT
WITH *Sefton's*
"PROFIT PACKAGING"

The egg is a quality product, but a humble one, until the Easter Bunny glorifies it! Take a tip from him...give your product eye-appeal with Sefton's Profit Packaging. There's utility-value, too in the ingenious pull-string top opening can that is practical for a variety of merchandise. It seals your product at the factory, is easy to open and can be closed again.



DISTRICT OFFICES • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul
Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle



OIL WELL comes Protective Packaging

with

BE B SQUARE *Microcrystalline WAXES*

The development of petroleum waxes—beginning with their application to matches in 1866 to make them burn faster—has been marked by an increasing number of uses—especially in the field of *Protective Packaging*.

So, too, the development of Be Square *Microcrystalline Waxes* has been responsible for many revolutionary applications in protective packaging. Their widespread use in this field reflects their many useful and unique properties.

Produced in two *High Melting Point* grades (170/175° F and 190/195° F), possessing *High Moisture Vapor Resistance* and excellent *Adhesive Properties*, Be Square Waxes answer many packaging industry problems. In addition,



they are *Tasteless, Chemically Inert, and Odorless*.

The outstanding properties of Be Square *Microcrystalline Waxes* have made them invaluable in the solution of many Wartime packaging problems. Their eventual use on the products of Peace is unlimited, so, investigate their possibilities for **YOUR** products **NOW**. Samples available in white, black and amber.

BARECO

BOX 2009



OIL CO.

TULSA, OKLA.



PAREZ NEW WET AND DRY STRENGTH QUALITIES BRIDGE THE GAP TO NEW FIELDS OF USEFULNESS FOR PAPER

When PAREZ** 607 is converted into the Cyanamid-developed active colloid for incorporation into paper, it helps paper bridge the gap between its own qualities and those of other materials. Wet or dry, paper treated with PAREZ, Cyanamid's new melamine paper resin, is stronger and tougher...has

**Trade-mark of American Cyanamid & Chemical Corporation covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080, and 2,345,543, and U. S. Patent Application Serial No. 453,032.

improved tensile and bursting strength . . . plus folding endurance and improved printability due to lack of waviness and curl.

There is also an important cost advantage. Paper may bear a higher ratio of value to cost than it would if it lacked the PAREZ wet strength features. Possibilities of profit on articles for which paper has long been the established material are thus improved because more value is built into them.

PAREZ 607 for wet strength papers helps produce extraordinary "above-the-line-of-duty" paper products, meeting super-specifications for military demands.

The war-proved applications for improved wet and dry strength papers made possible with PAREZ, point the way to new consumer and industrial peacetime product uses. Full details on the many advantages imparted to paper by PAREZ are available from Cyanamid.

Waxes • Wax Sizes • Rosin Size • Synthetic Resins • Casein • Alum • Sulfonated Oils • Fillers • Defoamers • Soda Ash • Caustic Soda • Salt Cake Acids • Clays • Satin White • Aerosol* Wetting Agents • Calmicro (Calcium Carbonate) and other Paper Chemicals

*Reg. U. S. Pat. Off.

When Performance Counts . . . Call On Cyanamid

American **CYANAMID** & Chemical Corporation

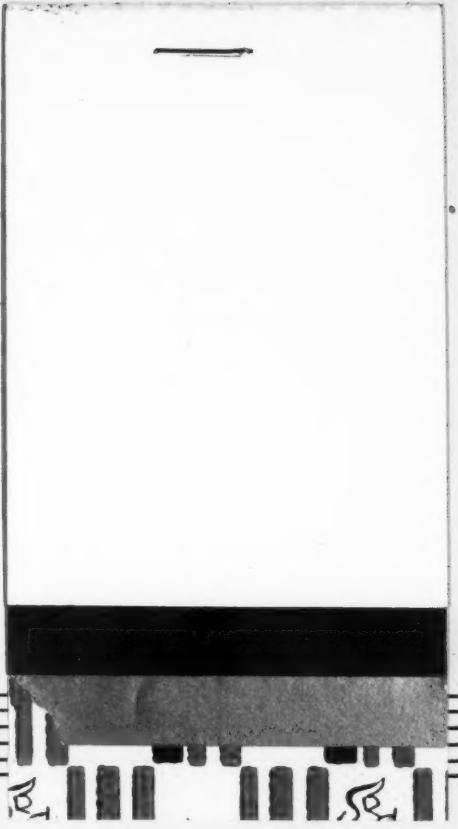
(A UNIT OF AMERICAN CYANAMID COMPANY)

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

DISTRICT OFFICES: Boston, Mass.; Philadelphia, Pa.; Baltimore, Md.; Charlotte, N.C.; Cleveland, Ohio; Chicago, Ill.; Kalamazoo, Mich.; Detroit, Mich.; St. Louis, Mo.; Azusa, Calif.; Seattle, Wash. In Canada: Dillons Chemical Company, Ltd., Montreal and Toronto

Sample Stock

from



Just a few samples taken at random from

Williams

1945 line of colorful patterned and textured papers. In spite of paper reductions

and restrictions, WILLIAMS continues to offer a variety of designs, colors and

finishes from which you may make your selection of a box covering paper.

Send for complete working samples.

CHARLES W. WILLIAMS & CO., Inc.
AUTHORITIES ON BOX COVERING PAPERS

303 LAFAYETTE STREET
NEW YORK 12, N. Y.

444 WEST GRAND AVE.
CHICAGO 10, ILL.

167 OLIVER STREET
BOSTON 10, MASS.

The Famous Hope Diamond
45½ carats. Owned by Mrs.
E. McLean, Washington, D.C.



THE BETTER THE PRODUCT
THE MORE IMPORTANT THE PACKAGE

Maybe that wasn't true 50 years ago,
25 years ago or even 10 years ago. It's true TODAY!

Tests have demonstrated the tremendous power
of the PACKAGE in today's merchandising. The most
popular products can lose sales overnight
when package is altered. Similarly they can gain sales
as quickly when package is improved, especially
when merchandising is implemented
with creative set-up boxes and sales-producing
cartons and displays.

INTRIGUING SET-UP BOXES
CREATIVE FOLDING CARTONS
UNUSUAL MERCHANDISE
COUNTER DISPLAYS
SPECIALIZED PACKAGING



PAPER BOX COMPANY
STATE AT SIXTIETH STREET • CHICAGO 21, ILLINOIS

CREATORS

DESIGNERS

MANUFACTURERS



If you moved your laboratory
into a customer's home

WOULD your product meet your quality standards if you ran a laboratory test in a customer's home? Is your package delivering to your customer the same fine product you pack in your plant?

Packaging takes over your quality control from the minute your product leaves your production line. Only the finest package can thoroughly protect the quality of your product until it reaches your customer's hands.

Many leading manufacturers rely upon Anchorglass containers and a carefully selected Anchor Cap to positively safeguard their fine quality every step of the way into the customer's home and until entirely consumed.

Such a package usually costs less in the long run because it eliminates complaints, returns, adjustments and loss of good will. May we show you what we mean?

"Meet Corliss Archer" every Thursday evening, entire Coast-to-Coast Network CBS.

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO.



Have you ever seen THE METAL COW?



THIS IS IT....

LAND O'LAKES
CREAMERIES INCORPORATED



GENERAL OFFICES
MINNEAPOLIS 13, MINNESOTA

November 27, 1944

Mr. C. E. Schaeffer
Stokes & Smith Co.
Summerville Ave. near Roosevelt Blvd.
Philadelphia 24, Pa.

Dear Mr. Schaeffer:

We have received photographs we had taken of our filling equipment and are mailing two of them to you under separate cover, showing two different positions of the filling machine. As I told you on the phone, we are very pleased with this equipment and it is performing much better than we had any reason to believe when placing the order.

Yours very truly,
LAND O'LAKES CREAMERIES, Inc.

W. J. Rice
Sales Manager
Milk Powder Department

WCR:es

THE CAN OF POWDERED MILK
filled with

STOKES & SMITH
FILLING MACHINES

Here we show but one of the many installations of S & S equipment for packaging war needed food products. If you are filling Powdered Food Products or Powdered Chemicals S & S Equipment can no doubt answer your filling problems. Write us for complete details.



Right—S & S Universal Filling Machine (with Auger Vac) filling 5 lb. cans of Powdered Whole Milk at Land O'Lakes Creameries, Inc., Minneapolis 13, Minnesota.

STOKES & SMITH CO

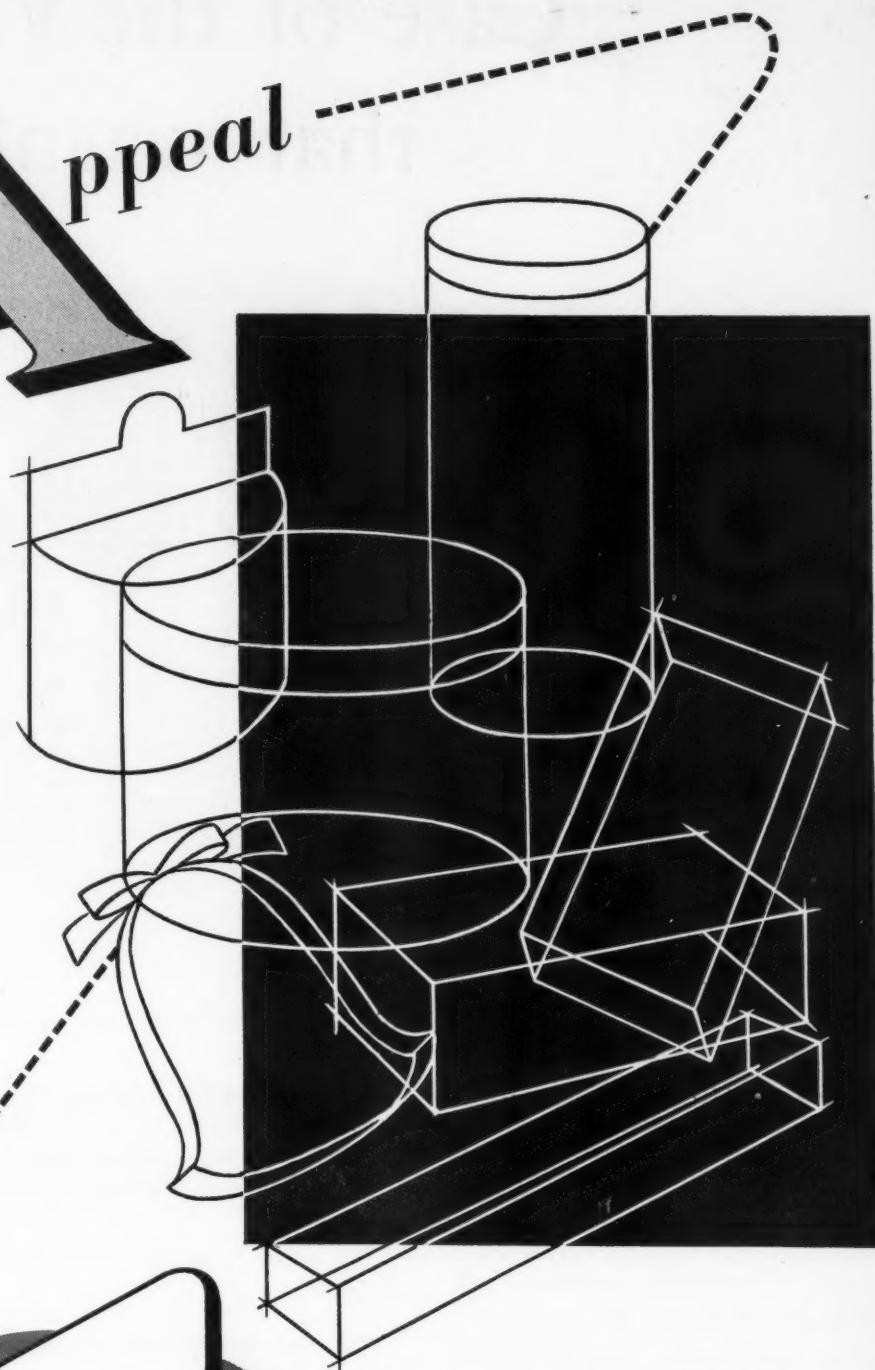
Frankford, Philadelphia 24, U. S. A.
FILLING • PACKAGING • WRAPPING MACHINES
Speeds to suit your needs—15-30-60-120 per minute

Eye Appeal

Can't you just picture the impact of your product's eye-appeal on post-war consumers, when they see it in a beautiful, protective, rigid, transparent Showbox?

Here is the ideal package for you and your ultimate customer. It creates impulse buying, economically. The purchaser prizes the container's transparency and re-use value during the entire life of the product.

Supplement your own packaging plans with the know-how of our designers and be among the first to have Showboxes as soon as materials are available.



Remember, visibility is going to be of first importance when the trend becomes, more than ever before, point-of-sale product display.

At the moment, the war effort is getting most Central States paper bags, water-proof and weather-proof case liners. With peace we will again produce custom-designed paper bags for every conceivable purpose, including many hitherto undreamed of.

DIVISION OF **CENTRAL STATES PAPER & BAG CO.**
2600 N. Broadway, St. Louis 6, Missouri, U. S. A.

CHICAGO
520 N. Michigan Ave.

NEW YORK
489 Fifth Ave.

DETROIT
1951 East Ferry St.

Case of the Vitalis that wasn't



A FEW YEARS AGO the makers of Vitalis had a mystery on their hands. Over-all sales of this famous hair preparation were greater than ever, yet sales to barbers were falling off.

A little sleuthing brought to light the fact that Vitalis bottles were being refilled with substitutes and supplied as the real thing.

As a result, sales were being lost and Vitalis itself was getting a black eye among barbers' customers.

The Vitalis people called on Sun Tube to help solve this ticklish problem. We developed a special one-shot, collapsible tube which, once

opened, could be neither re-used nor refilled.

Barbers liked the tube because it was handy and gave an exact measure. Customers liked the idea because it guaranteed the genuineness of the product.

The result? Barber sales more than doubled!

How all this Concerns You

Now, we may not be able to solve your present or postwar packaging problem as dramatically as that of Vitalis. But this gives you an idea of the resourcefulness our engineers and designers can bring to bear.

You already know the advantages of the collapsible tube. Its convenience and compactness. The fact that it's germ-proof, light-proof, and virtually unbreakable. That the contents won't dry out in use.

Just as important, however, are the new developments which make Sun Tubes ideal containers for products never before thought suitable for tube packaging. Maybe yours is one of them.

Why not find out? For information or advice that may help solve your particular problem, just call the Sun Tube representative nearest you. He'll be glad to help you.

SUN TUBE CORPORATION

Hillside, New Jersey

CHICAGO 1, ILL.
James L. Coffield, Jr.
360 No. Michigan Avenue

ST. LOUIS 1, MO.
M. P. Yates
Arcade Building

ST. PAUL 1, MINN.
Alexander Seymour
615 Pioneer Building

LOS ANGELES 27, CALIF.
R. G. F. Byington
1260 North Western Ave.



MAGNIFIED 70,000,000 TIMES GLASS MIGHT LOOK LIKE THIS

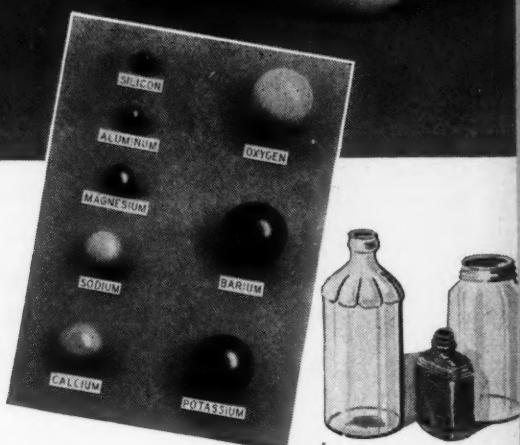
THE complex "space model" of glass you see above was constructed by members of Armstrong's Research Laboratories. It is their conception of what a minute sliver of ordinary container glass ought to look like if magnified 70 million times!

They say "ought to" because they can't actually look through the powerful X-ray equipment that does the magnifying. But through the use of X-ray analysis, plus some complex mathematics, they know that the model above shows accurately the probable arrangement of atoms in the piece of glass they analyzed.

Each of the spheres in the model represents one atom of an element used in glassmaking. In this particu-

lar piece of glass there are silicon atoms from sand, calcium atoms from lime, sodium atoms from soda ash, and atoms of aluminum, magnesium, potassium, barium, and oxygen. Since most glass-making ingredients are oxides, it is not surprising that there are a large number of oxygen atoms in finished glass.

With the aid of a model like this, Armstrong's glass scientists are able to theorize on a great many of the physical and chemical properties of glass. From the size of the atoms,



and the manner in which they are joined to other atoms, ideas are obtained about the melting processes, about density, and even about the light transmission and other properties of the glass represented.

For further interesting facts about the skill and experience that go into the making of Armstrong's fine glass, send for your free copy of "Men and Glass." Address Armstrong Cork Company, Glass and Closure Division, 5904 Prince Street, Lancaster, Pennsylvania.

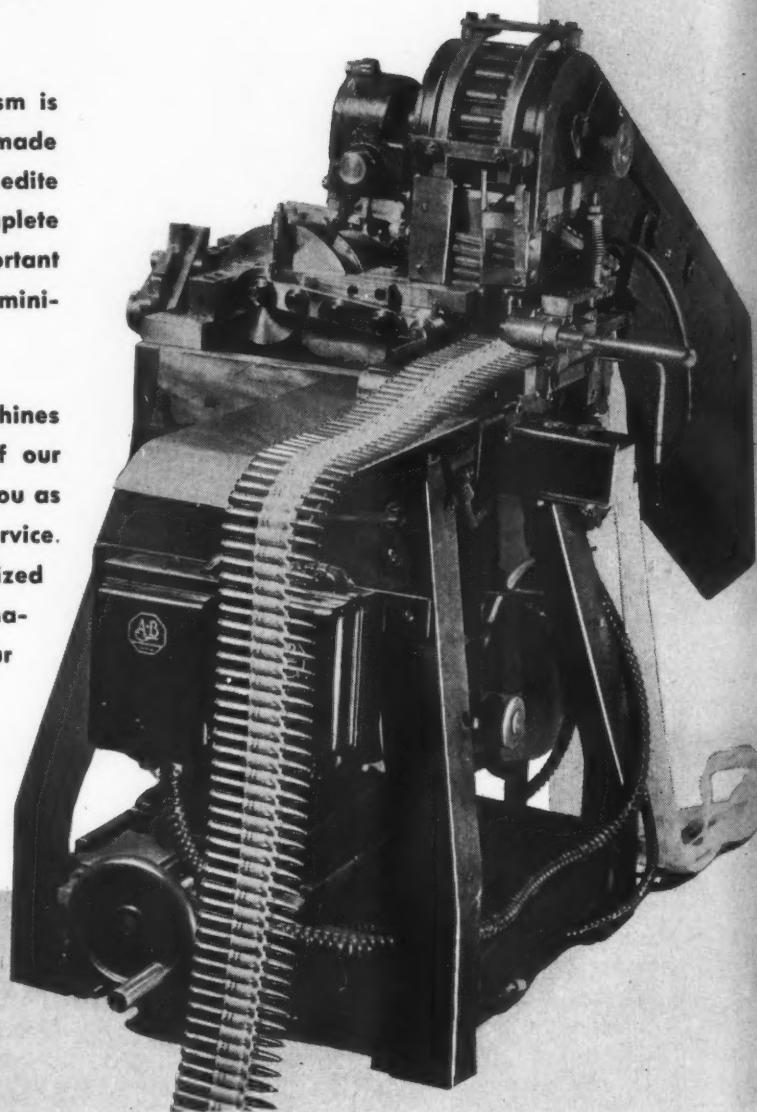


PACKAGING MACHINE

This is the picture of a Standard-Knapp machine developed especially for a war need. It automatically inserts 30 caliber bullets into the machine gun belts.

As the picture shows, the mechanism is comparatively simple. In fact, it was made as simple as possible in order to expedite production. At the same time, complete efficiency is attained and an important war operation is performed with a minimum of manpower and time.

We do not mean to make these machines after V-Day. They are not part of our regular production. We show it to you as an example of Standard-Knapp service. We develop machines for specialized packaging purposes and build the machines for all packaging industries. Our case packers and case sealers are standard in most industries for top efficiency, low cost and long life.



STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING, AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue 221 North LaSalle St. 145 Public Square 300 Seventh Street
NEW YORK 12, N. Y. CHICAGO 1, ILL. CLEVELAND 14, OHIO SAN FRANCISCO 2, CALIF.

430 S. San Pedro Street 3224 Western Avenue 1208 S. W. Yamhill Street Paul Brown Building
LOS ANGELES 13, CALIF. SEATTLE, WASH. PORTLAND 5, OREGON ST. LOUIS 1, MO.

Windsor House, Victoria Street, LONDON, ENGLAND



Clearsite Plastic CONTAINERS

SHATTERPROOF
FEATHERLITE
SEAMLESS
COLORFUL

LABEL IMPRINTED
DIRECTLY ON CON-
TAINER DURING
MANUFACTURING
PROCESS

—give BETTER protection—FINER appear-
ance to thousands of quality products. . .

Within certain limits almost everything that
needs packaging protection becomes a candi-
date for CLEARSITE containers when re-
styling is considered. That's because the in-
herent advantages of CLEARSITE offer
greater security to products and increased
display value and added Sales Appeal.

Ask our Package-Engineers for suggestions, without obligation!

*Reg. U. S. Pat. Off.



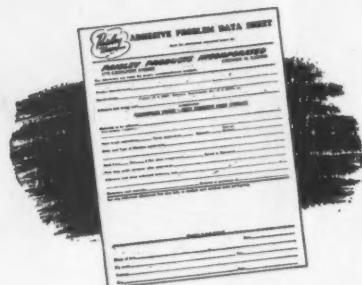
CELLUPLASTIC CORPORATION

40 AVENUE L

NEWARK, N. J.

WEST COAST REPRESENTATIVES: CONTAINER SERVICE CO., 1966 North Western Avenue, Los Angeles 27, Cal.

DON'T JUST BUY A DRUM OF GLUE... BUY



SEND FOR this Adhesive Problem Data Sheet. It's your guide to getting the ONE best, most efficient adhesive for the specific operation you describe. Trial shipment will be sent ON APPROVAL if desired. If you are not entirely satisfied, we'll gladly cancel the invoice. This skilled laboratory service does not obligate you. It's the SURE... the modern way to buy adhesives.

RULE-OF-THUMB methods no longer apply to the purchase of good Adhesives. The risk is far too great! Speedy, modern, adhesive operations require all the scientific skill and efficiency... all the facilities and control that Paisley service gives. Instead of delivering "just a drum of glue", Paisley sends you an Adhesive designed to perform the one specific bonding operation with the greatest possible speed and efficiency! Every factor affecting that operation is studied by our capable laboratory staff. The correct formula is then established and periodically checked for viscosity, body, storage life, machinability, emulsion stability, uniformity of color and cohesive spread and other properties. Don't take chances with YOUR production. Stop interruption losses due to faulty Adhesives. Decide NOW, to entrust ALL your Adhesive requirements to this one big reliable source.



Three Adhesive Chemical Engineers conducting routine tests in one of our busy laboratories.

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N.Y.



"The bigger the family — the better the service"

THAT'S TRUE of businesses as well as families! Continental's family offers you technical skill, varied experience, extensive resources and facilities. This combination guarantees you complete service and the ideal package for your product.

Our packaging experts and engineers will analyze your problem impartially. Our great variety of containers assures you of the very one you want.

We make all kinds of packages now—metal containers, liquid-tight paper containers and cups, fibre cans and drums, steel pails and other heavy-duty containers.

Right now we're busy serving Uncle Sam. But keep your eye on Continental! And on Continental's trademark, too. The Triple-C stands for **one** company with **one** policy—to give you only the very best in quality and service.

Tune in: "REPORT TO THE NATION" every Saturday over coast-to-coast CBS network

CONTINENTAL
PAPER
DIVISION

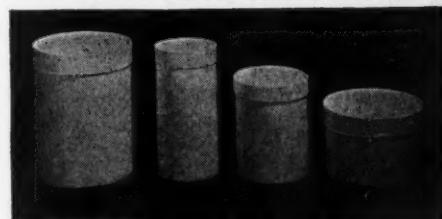
CAN COMPANY, INC.

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT Boothby Fibre Can Co.
FOOD CONTAINERS Roxbury, Mass.

PAPER CUPS Mono Containers, Newark, N.J.

COMBINATION PAPER AND METAL CONTAINERS
Headquarters: 330 W. 42d St., New York 18, N.Y.
13 Plants—Sales offices in all principal cities



Continental Paper Containers—Our complete line of paper cups and liquid-tight containers is widely used by dairies, confectioners, meat packers and by companies for in-plant feeding. Cups available in 6 oz., 8 oz., 12 oz., and 16 oz. capacities plus special sizes up to 10 lb. cap. Liquid-tight containers range in size from $\frac{1}{4}$ pt. up to 10 lb. cap.

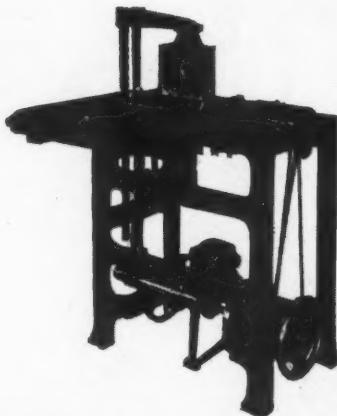
So Many Need PETERS PACKAGING MACHINES..... Some May Have to Wait!

IF YOU'RE ONE OF THE FORTUNATE FOLKS who are now enjoying the savings resulting from the use of PETERS economical packaging machinery for setting up and closing cartons, congratulate yourself! There are many who envy you!

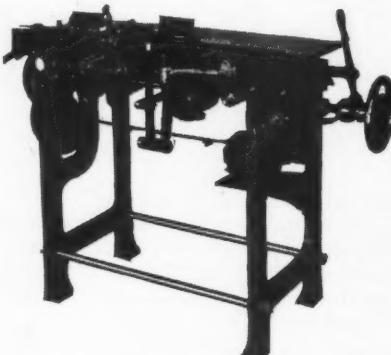
Long before the government halted the building of packaging machinery, the PETERS organization voluntarily turned to all-out production of materials for winning the war. Today, as for many months past, the Armed Forces have first call on PETERS many skills. At present we are turning out parts for aircraft, radar, landing craft and other weapons to hasten the day when we can again make more packaging machinery for civilian use.

To those who have ordered new PETERS packaging machines, we can only say, "Be patient—they will be worth waiting for!" And we urge those who are still in the planning stage to place orders as soon as possible, as we expect to make deliveries in the same sequence as orders are received. If you will send samples of cartons you plan to use, we will gladly recommend machines to meet your specific requirements.

In the meantime, let's all work to speed the day of Victory!



This PETERS JUNIOR CARTON FORMING AND LINING MACHINE sets up 35-40 "Peters Style" cartons per minute and requires only one operator. After the cartons are set up they drop onto the conveyor belt where they are carried to be filled. Can be made adjustable to set up several size cartons.

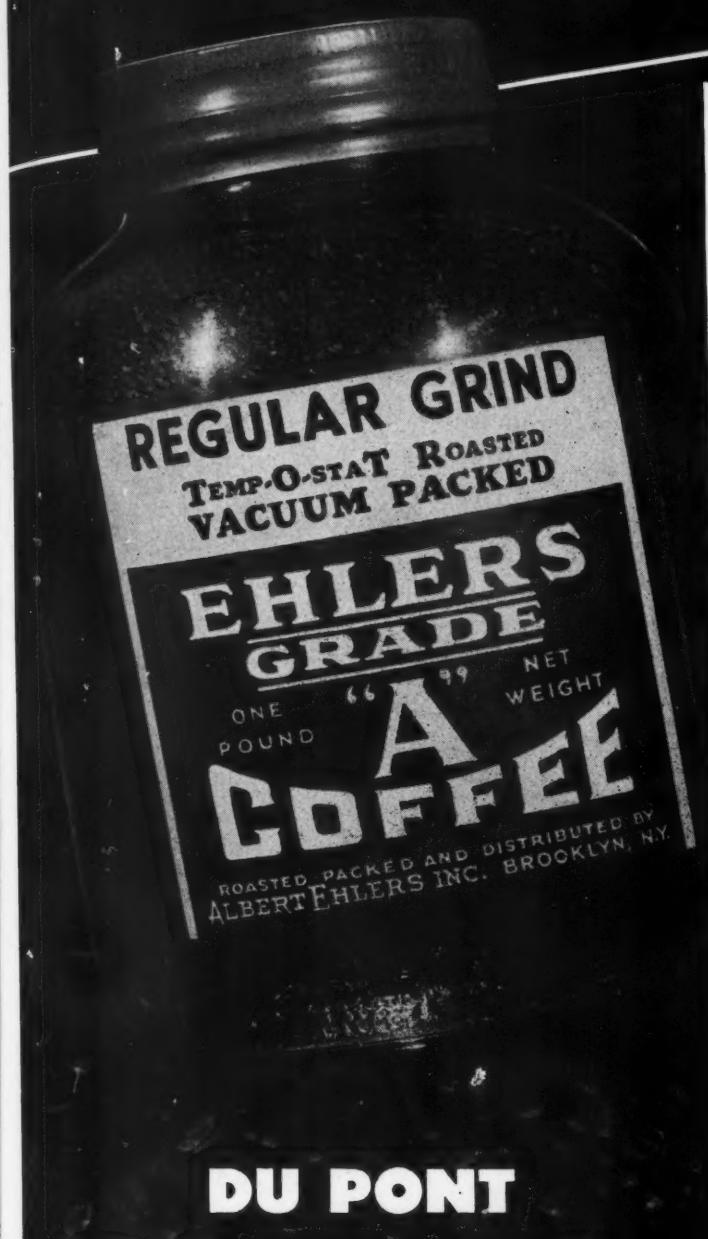


This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE closes 35-40 "Peters Style" cartons per minute and requires no operator. After being filled, the cartons enter this machine as open, filled cartons and leave machine completely closed, ready to be packed for shipment or wrapped. Can also be made adjustable to close several size cartons.

PETERS MACHINERY CO.

4700 Ravenswood Avenue, Chicago, Illinois

This Coffee Stays Fresh . . .
Thanks to Vacuum-Packing
and CEL-O-SEAL Bands



DU PONT
CEL-O-SEAL BANDS

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

WHEN you vacuum-pack a product to seal in freshness and flavor, it's important that the closure stay tight. The roasters of this fine coffee take no chances. They seal the closure with a Du Pont CEL-O-SEAL* cellulose band.

CEL-O-SEAL bands hold closures securely in place. These bands protect the product from outside atmospheric conditions . . . keep out dirt, dust and other foreign matter. They are assurance that the product reaches the consumer free from substitution or adulteration.

CEL-O-SEAL bands can also serve as colorful second labels. They are available in a wide range of distinctive hues, and can be indelibly printed in color combinations with trade mark or sales message. Every fine product deserves the final touch of quality given by CEL-O-SEAL bands.

Today, as you plan your products of tomorrow, consider the advantages of CEL-O-SEAL bands. Write for full information.

*Trade Mark

CEL-O-SEAL bands and WIND-O-BAND* are sold by:

E. I. du Pont de Nemours & Co. (Inc.)
"Col-O-Seal" Section, Empire State Bldg., New York City 1
Armstrong Cork Co., Glass & Closure Division, Lancaster, Pa.
I. F. Schnier & Co., 683 Bryant St., San Francisco 7, Calif.



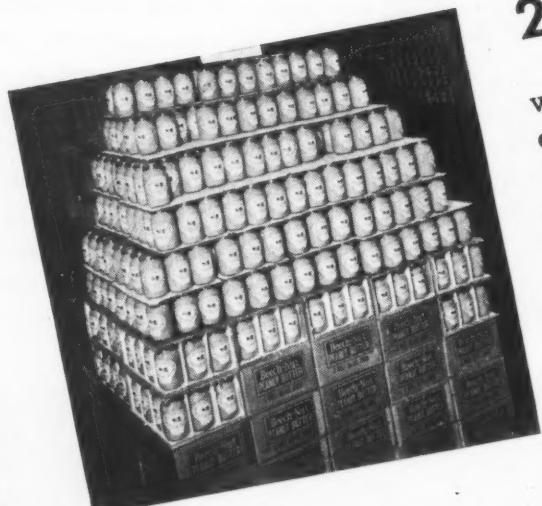
Give Your Products The

Your products get a three-way lift when you use Duraglas Containers. For our service works with you from production line to the consumer's mind—helping you package faster and better—helping your products get maximum display—increasing consumer preference.



1 A LIFT TO PRODUCTION—

Simple, isn't it? Yet so effective. A single fast-moving line of jars was divided into a double line to feed tandem machines for the next packaging operation. Another practical application of the service that helps users of Duraglas Containers.



2 A LIFT TO DISTRIBUTION—

It's good news for any grocer when an item registers 300% increase in sales, moving 28 cases in 3 weeks with no promotion except the floor display shown here. Take a popular product, pack it in gleaming glass, and you have the edge on market preference. For products in Duraglas Containers sell on sight.

3 WAY LIFT

3 A LIFT TO SELLING—

What she sees sells her . . . what she reads sells her . . . what she hears sells her. Sales of your products are boosted when you pack in Duraglas Containers. For your customers read about the advantages of Duraglas Containers, they hear about Duraglas Containers over the air—they see the quantity, quality, color and condition of your products when in glass.



Enjoy a "Lift to Living" that is a "Lift to Selling" products packed in Duraglas Containers—Fred Waring and his Pennsylvanians, over the Blue Network from coast-to-coast every Thursday Evening—10 p.m. EWT—9 p.m. CWT—8 p.m. MWT—7 p.m. PWT.

OWENS-ILLINOIS GLASS COMPANY

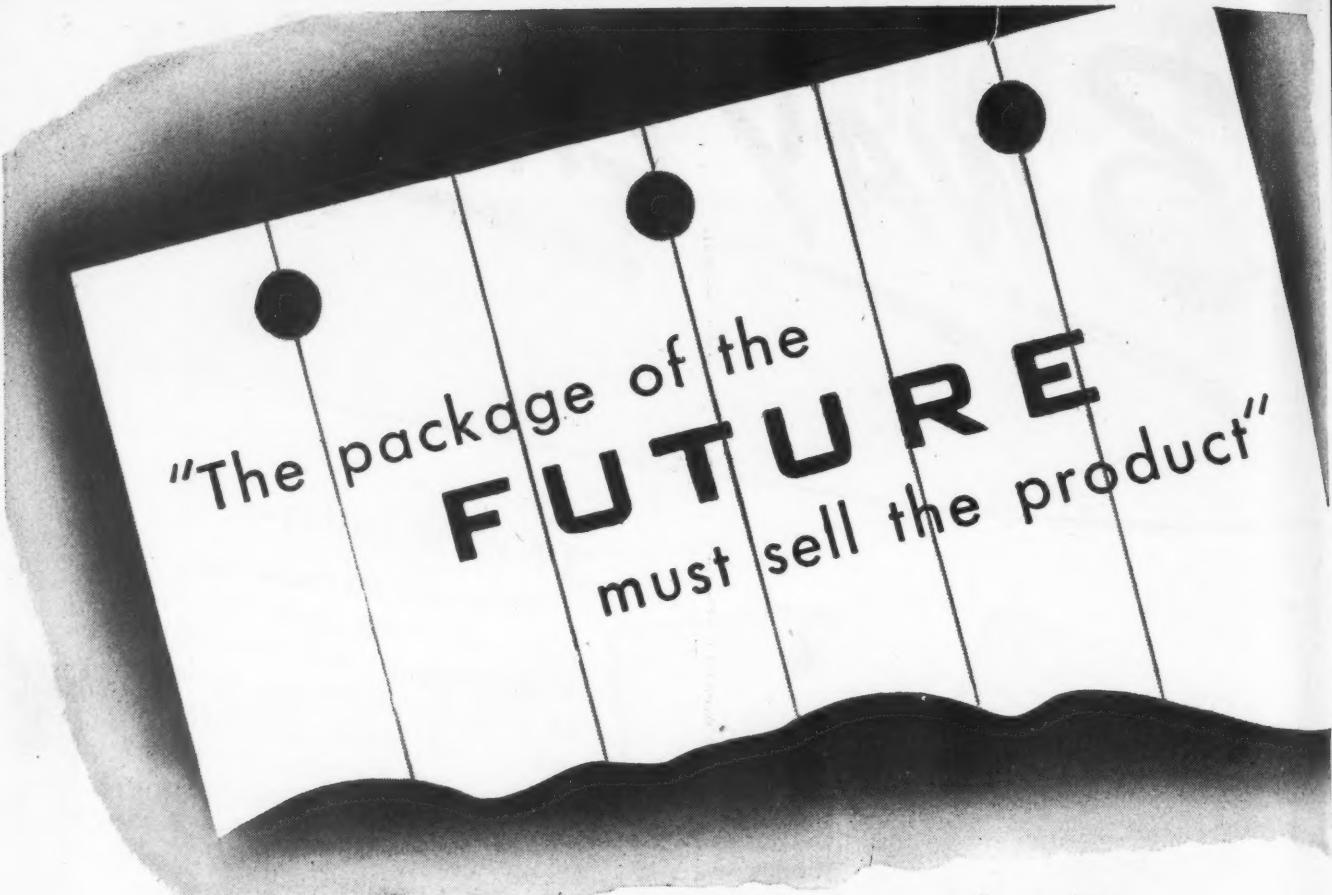
TOLEDO 1, OHIO

Branches in all Principal Cities

Duraglas
TRADE MARK REG U. S. PAT. OFF.

CONTAINERS

Preserve, Protect and Sell by Sight



"The package of the
FUTURE
must sell the product"

FOR OVER 80 YEARS, Gair has been a major contributor to the art of packaging. Many of the great industries of America and the world have turned to Gair to solve their packaging problems. Many an obscure product has achieved international distribution due to the ingenious packaging ideas of Gair — from the cracker barrel and hoop skirt era to frozen foods. The principles of packaging that are meeting with rigid war-time standards will be utilized in packaging everything from pencils to plow shares. Send your present and postwar packaging problems to Gair.



Appealing, appetizing designs will sell the product. This Sunshine Fancy ASSORTMENT is printed in full color right on Gair Patent coated paper board. Another famous Gair design and product. Write for Printers' Ink article by Egmont Arens industrial designer in which this Package appears.

WRITE FOR BOOKLET "FASHIONS IN CARTONS"

ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO
Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers





TAPE CUTS COSTS

And FILMONIZE Self-Sealing Tapes cut them even more. Why? Because FILMONIZE works faster. It strips off the roll more easily—has no annoying "curl back," no tangle, no waste—and it seals instantly without water.

Some of the biggest industrial plants in the nation use it—and tell us of the many ways it saves money for them. Why not put it to work for you?

Your local distributor will gladly show you the whole FILMONIZE line: Transparent Tapes, Colored and Multi-Colored Tapes, Printed Tapes, Riveting Tapes, Identifying Tapes, Splicing Tapes, Acetate Fibre Tapes, Metal Tapes, Specialty Tapes, Packaging Tapes. All in widths of $\frac{1}{2}$ " to 18".



filmonize
TRADE MARK REG.

SELF-SEALING TAPES
INTERNATIONAL PLASTIC CORPORATION
MORRISTOWN NEW JERSEY

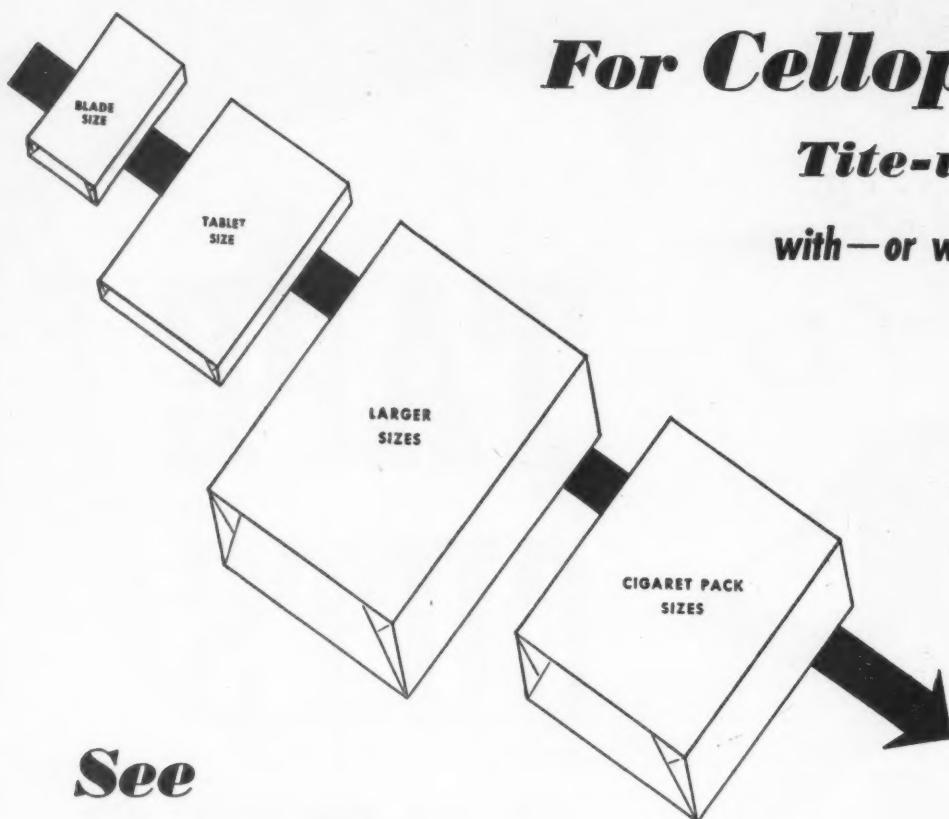
For Cellophane Tite-wraps...

with—or without TEAR-STRIPS—

UP TO

350

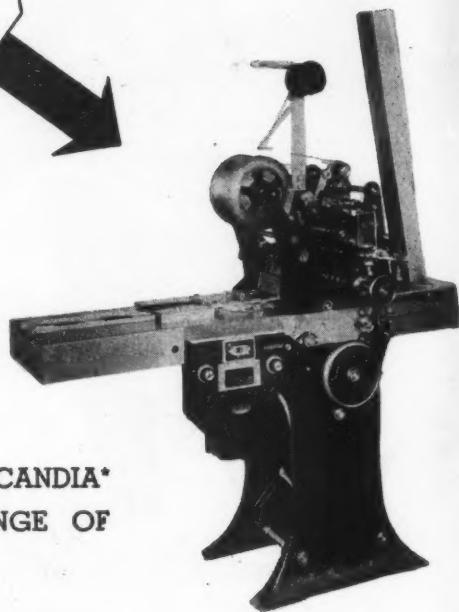
per minute!



See
Scandia—
before you decide...



THERE IS A STANDARD SCANDIA* UNIT FOR A WIDE RANGE OF PRODUCTS ...



ANYTHING that needs the protection of tight, cellophane wrapping, or the product-prestige of transparent moisture-proof cellophane . . . if produced in volume, can be wrapped the snug, secure Scandia way. Machines for this type of work are widely used. *Inquire about them, NOW!*

Or course—we are still doing vital War Work, but it isn't too early to get data for post-war packaging problems . . .

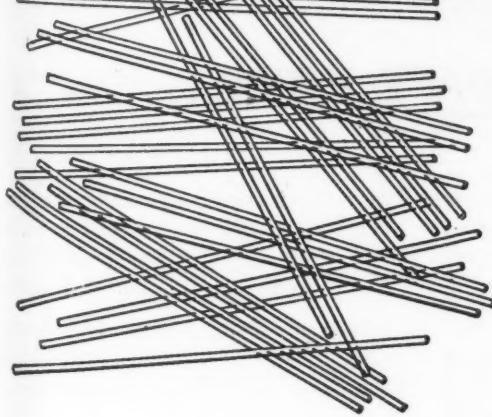
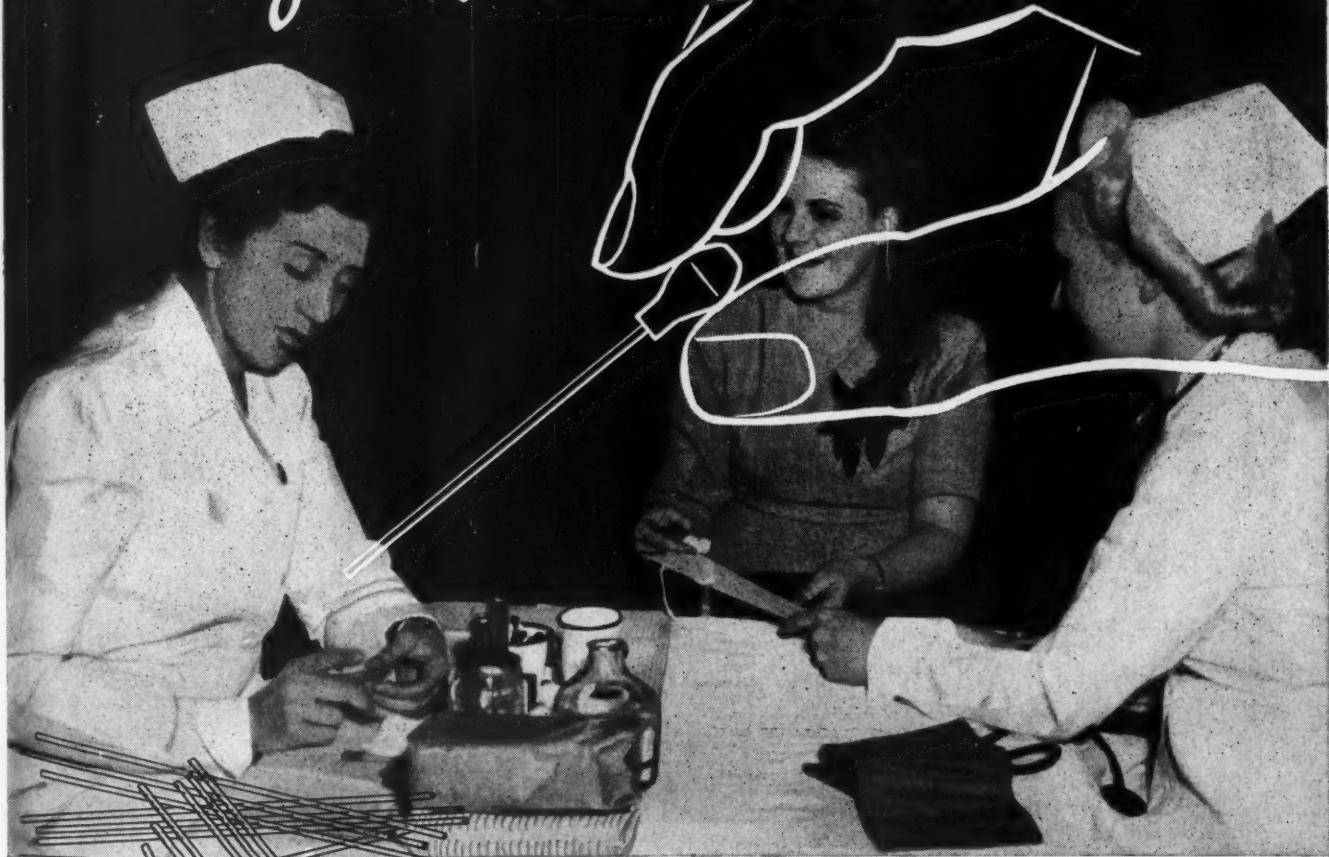
Ask for details! Our Packaging Engineers are at your service.

Scandia MANUFACTURING CO.

NORTH ARLINGTON

NEW JERSEY

★ for Vital Service ★



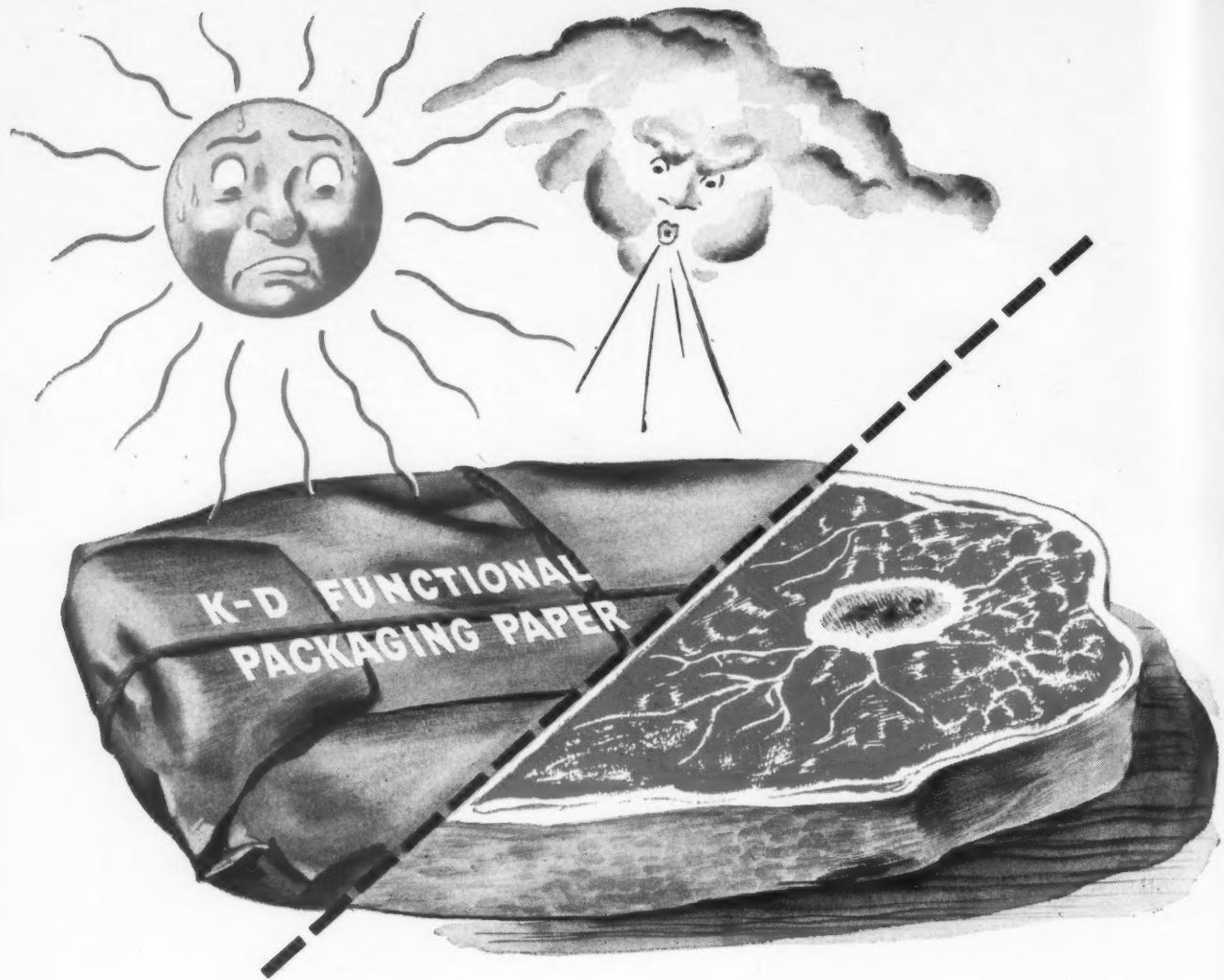
The blood plasma, human serum albumin and whole blood programs of our armed forces require blood donations at the rate of nearly one hundred thousand every week, made by the people of America.

The process in every case includes drawing a minute sample of blood into a capillary tube for a hemoglobin test.

Production of capillary tubes and also of vials used to hold the testing solution is another specialized Kimble contribution in our war effort.

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •



THE BLOOM THAT DIDN'T FADE

THAT RICH RED GLOW that makes meat luscious and saleable fades into a sad and sorry sight when exposed to light and air.

All of which you undoubtedly know. But perhaps you haven't heard of the new method of *preserving* "bloom" in meats—and prolonging life, eye-appeal and flavor in many other foods as well.

Keller-Dorian Functional Packaging Papers were developed for war-time use . . . for protecting perishable products by reducing to a negligible minimum the *causes* of spoilage . . . air, light, absorption moisture or dehydration.

K-D papers seal *in* the inherent flavor and goodness of food products...and by maintaining moisture-vapor-air stability retard bacteria growth and vitamin loss.

These new functional papers are available in two structures: a plastic coating and aluminum foil. Both types are permanent and flexible . . . neither will crack, or peel or become tacky at temperatures ranging from 190° above to 50° below zero (F). They may be heat sealed.

K-D papers may be scored, cut, folded to any size, shape or style package.

You may not be sure of just what this

new development—born of war-time necessity and urgency—will mean to your products. Why not take advantage of free testing samples and data sheets.

Investigation and a little experimental work, today may put you well ahead of the parade when peacetime competition is on.

KELLER-DORIAN
CORPORATION
Empire State Building
New York 1, N. Y.

FUNCTIONAL PACKAGING PAPERS *for Protecting Perishable Products*



THERE'S MORE TO IT THAN KNOWING HOW

You often hear it said—"it all depends on knowing how." We can't agree with that completely. To know how is important, of course, but perfection in performance comes only from long and constant practice.

In making glass containers, for example, we know that ingredients should be measured with the utmost possible care . . . and we do it. We know that molds should be made with microscopic precision . . . and we do it. We know that in manufacturing and in inspecting, there are no unimportant details. From one end of our organization to the other, doing things right is a habit developed by long and constant practice.



Factory and Main Office: BALTIMORE, MD. • New York Office: 500 Fifth Avenue • Chicago Office: 1502 Merchandise Mart

WET STRENGTH

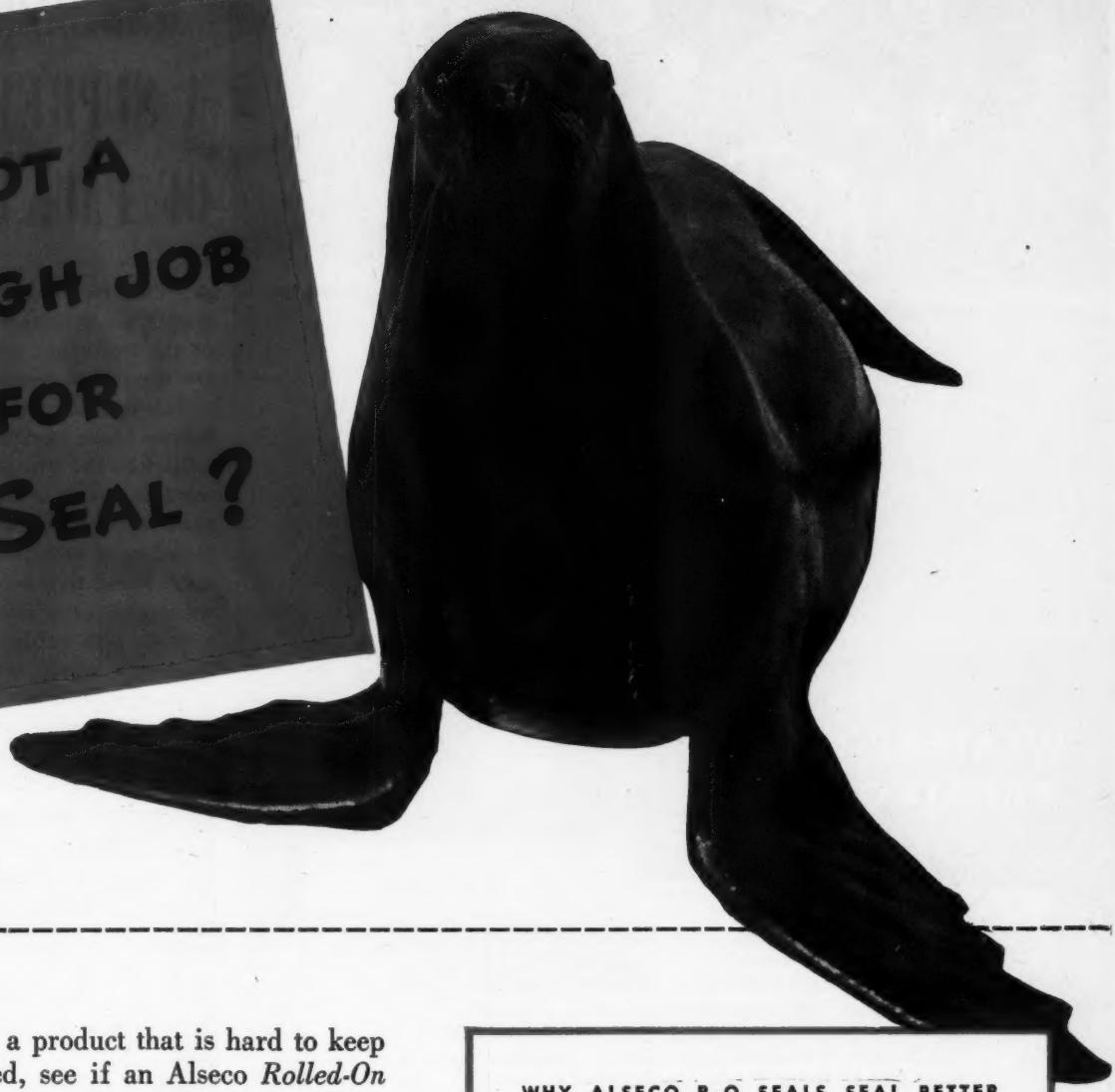
CAN NOW BE ADDED TO THE MANY
OTHER QUALITIES OF INEXPENSIVE
GLASSINE AND GREASE-
PROOF PACKAGING
PAPERS

Any glassine or greaseproof packaging paper (plain, waxed, lacquered or laminated) can now be produced with the added quality of WET STRENGTH. This is done in the process of paper manufacture and provides a substantial saving in comparison with other wet-strength materials. This accomplishment makes the use of glassine and greaseproof available to a whole new field where the possibility of condensation, or the presence of water in a product, might otherwise cause package failure.

Riegel's Wet-Strength Papers have already proven their worth in special wartime usage. In addition, a limited tonnage can now be offered for permissible civilian use. Send for samples and our technical bulletin on this new Riegel development.

Riegel PAPER CORPORATION
342 MADISON AVE., N. Y. 17, N. Y.

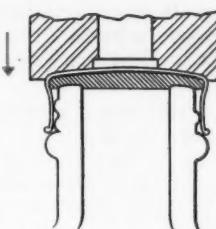
GOT A
TOUGH JOB
FOR
A SEAL?



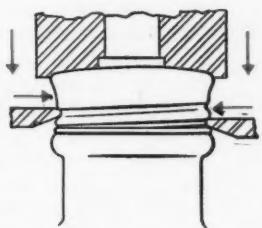
If you have a product that is hard to keep tightly sealed, see if an Alseco *Rolled-On* Seal isn't the answer to your problem. Alseco Seals are applied by a unique method that greatly reduces leakers and breathers. Proof of that is plentiful.

The war has temporarily limited the availability of Alseco Seals, but that doesn't stop you from finding out all about them and running tests on sealing efficiency. Do that now and, postwar, your sealing problem may be answered.

WHY ALSECO R-O SEALS SEAL BETTER



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailor-made, fits perfectly, seals, tighter.

ALSECO
SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY • 1345 THIRD AVENUE • NEW KENSINGTON, PENNSYLVANIA
SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

TAYLOR-MADE SEALS



ALSECO ALUMINUM

"RADIOSONDE"— A SUPREME TEST OF PACKAGING



If a package straight from the heavens lands in your yard... it will probably be a "radiosonde"... scientific aerial radio transmitter and recorder... balloon-borne many miles into the stratosphere... broadcasting basic weather information... until, its mission fulfilled, it is parachute-borne safely to earth. Complete instructions will be found on the package for its return... so that it may be sent aloft again and again.

BOSTITCHING plays a part in insuring the safe landing and the re-use of this modern miracle... an outstanding example of the Weather Bureau's engineering ingenuity and salvaging economy.

This use illustrates a simple, frequent Bostitch application. Whenever you think of fastening... metal, wood, plastics, paper, cloth, leather, rubber... in any combination... remember that in thousands of war-time and peacetime applications **BOSTITCH fastens it better and faster with wire.**

Bostitch field men the world over... specializing exclusively in stapling... backed by forty years' stapling experience... will be glad to discuss with you how Bostitch machines, when available, can help you get the best fastening results.

Bostitch (Boston Wire Stitcher Company) 52 Duane Street, East Greenwich, R. I. (or Bostitch-Canada, Ltd., Montreal).

Bostitch Staples in most sizes
are now available.

BOSTITCH

fastens it better, with wire **AND FASTER**

ALL TYPES OF STAPLES APPLIED BY MACHINES
ALL TYPES OF MACHINES FOR APPLYING STAPLES

● "The highest-flying package in the world" would be an appropriate description of the Bostitched container which houses the Weather Bureau's "Radiosonde".

This little automatic radio transmitter is balloon-borne twelve, twenty, twenty-four miles into the stratosphere, sending earthward its reports of wind velocity and direction, temperature, barometric pressure and humidity at various elevations—so that we may know tomorrow's, or next week's, weather. Soaking rains may be encountered—or air with virtually no humidity at all. Hurricane winds may buffet it—or air pressure may be only one per cent of that on earth. Temperature may reach as low as one hundred degrees below zero.



Eventually its balloon bursts and the Radiosonde floats to earth to make a safe, though sometimes rough, landing. The finder is requested to return it to the Weather Bureau so that it may be used over and over again.

The arduous conditions through which the Radiosonde must pass—including the shock of landing—require a scientifically designed container with the most secure method of fastening. It is in fastening this container that Bostitch plays its part.

Wherever protective packaging is important—or successful assembly depends upon a tight, yet quick-to-apply fastening—Bostitching offers advantages both in holding power and fastening time. This Radiosonde is one of thousands of war-time and peace-time applications on which Bostitch *fastens it better and faster with wire.*

Today • Protection, Convenience for Vital War Aids

Tomorrow • Protection, Convenience and Appeal for your
Peace-time packages... creams, pastes, powders

WITH WIRZ COLLAPSIBLE METAL TUBES • The protection and convenience characteristics of WIRZ Collapsible Metal Tubes make them the ideal container for vital ointments, lubricants and special war aids for our Armed Forces... over ninety percent of our total tube production is on these war "musts." Civilian deliveries give way for these important war items. War Orders come first... no one questions that.

When Peace-time products have the right-of-way again, you can add good appearance to protection and convenience... and WIRZ Tubes will protect your product, your brand name and your market.

WIRZ Tubes are practical in different sizes for a variety of products... with suitable wax or lacquer linings to combat corrosion and seepage. The WIRZ Mono-Pak,* one-application tube, makes an excellent merchandising unit. Can be hermetically sealed, requires no capping or labeling. Put WIRZ Tubes in your post-war packaging plans.

*Registered Trade Mark

Give an extra push now—buy more War Bonds

New York 17, N.Y. Chicago 4, Ill. Memphis 2, Tenn. Havana, Cuba
30 E. 42nd St. 80 E. Jackson Blvd. Wurzburg Bros. Roberto Ortiz Planos

★ A. G. SPILKER { Los Angeles 14, Calif., 1709 W. 8th Street. ★
(EXposition 0178)—Also Danville, Calif.

COLLAPSIBLE METAL TUBES • LACQUER LININGS • WAX LININGS • WESTITE CLOSURES
HOUSEHOLD CAN SPOUTS • METAL SPRINKLER TOPS • COMPRESSION MOLDING

A·H·WIRZ, INC.

Established 1836
CHESTER, PA.

EXPORT DIVISION—
751 DREXEL BUILDING, PHILADELPHIA 6, PA.

LOOKING INTO THE FUTURE



When you think of bottles
think of

Swindell

Machine made and hand made
glass containers for cosmetics,
drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK

ROBERTO ORTIZ—HAVANA, CUBA

YOU GET IMPORTANT PACKAGING BENEFITS WHEN YOU...

Laminate with Microcrystalline Waxes!

Even now with priorities controlling their use, Socony-Vacuum microcrystalline waxes are going into many types of laminations for packaging.

Post-war, there'll be no limit to their possibilities in this field.

The reason: These special hydrocarbon waxes provide important advantages over often used water soluble binders such as starch, dextrine, silicate of soda and casein.

They are *adhesive, flexible, and highly resistant* to moisture. Used as a laminating agent, they form a continuous layer of wax between the paper plies. This gives you a moisture-vapor-proof sheet that meets many requirements for

packaging foodstuffs and other products.

Equally important, they are easy to apply. Also, they do not fracture at low temperatures, a factor that is vital in laminations for frozen food packaging. They're already being used successfully in the bonding of paper and paper board to glassine and other greaseproof papers, metal foils, and cellophane.

Ask your Socony-Vacuum Representative for information on possible application of these waxes to your needs.

**CALL IN SOCONY-VACUUM PROCESS PRODUCTS
RESEARCH AND SERVICE**



**SOCONY-VACUUM
OIL CO., INC.**

26 BROADWAY, NEW YORK 4, N. Y.



Standard Oil of New York Div.

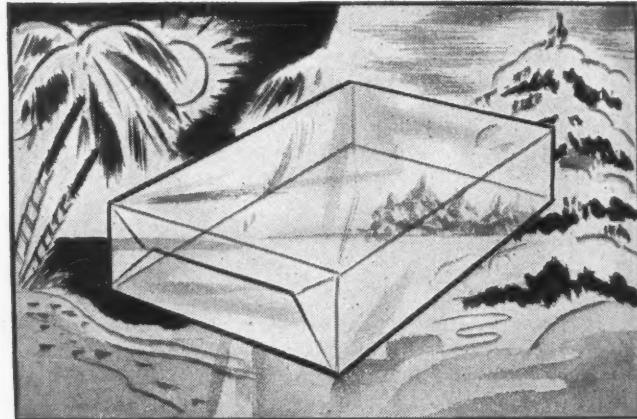
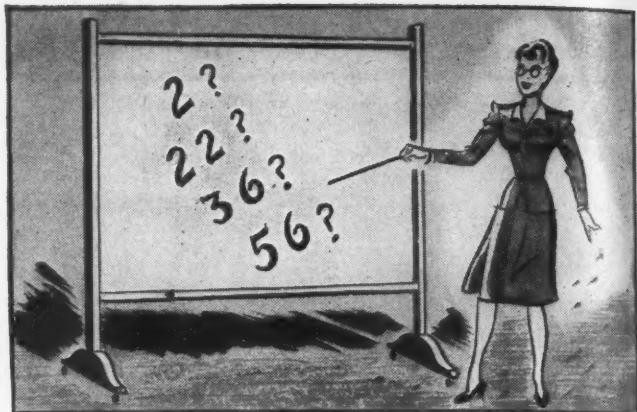
White Star Div. • White Eagle Div.

Chicago Div. • Lubrite Div. • Wadham's Div.

Magnolia Petroleum Company

General Petroleum Corp. of California

TUNE IN "INFORMATION PLEASE"
MONDAY EVENINGS, 9:30 E.W.T.—NBC



Q. What packaging problem is involved in keeping these doughnuts fresh?

A. The package has to retain moisture to keep the doughnuts fresh and tasty, yet guard against the danger of moisture dissolving the sugar. There's a special type of Du Pont Cellophane for this special problem. It keeps in enough moisture to maintain freshness . . . yet lets excess moisture escape so that the sugar coating is not affected.

No DOUBT there is a type of Du Pont transparent film—Cellophane, cellulose acetate or polyvinyl film—especially adapted to your requirements. Du Pont research will help you find it. Military needs now limit the ability of our converters and ourselves to supply the civilian demand for these Du Pont products. However, investigate now, so you will be prepared to take full advantage of transparent packaging when war requirements are relaxed. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

Q. How many different types of transparent films are made by Du Pont? 2 . . . 22 . . . 36 . . . 56 . . . ?

A. Du Pont makes 56 different types of transparent films from three different basic materials—Cellophane, cellulose acetate and polyvinyl film. Many are radically different. Others vary only slightly . . . are chemically tailored to fill the packaging requirements of a specific product, or to meet specifications for many non-packaging uses.

Q. Can Du Pont Cellophane be made to withstand extreme temperatures?

A. Yes . . . there are special types for extreme temperatures. One type, for instance, developed for foods frozen at 40° F. below zero, retains its protective properties while stored at zero to -5° F. Another type is used to wrap hard candy while hot (175° F.).

DuPont Cellophane

Shows what it Protects—at Low Cost



BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



Strong Arm Stuff

That's what is needed

to wrestle these H & D corrugated shipping boxes filled with steel pipe couplings.

They weigh from 293 to 523 pounds. Can corrugated stand the gaff? All shipments to date have arrived in perfect shape—some have traveled 6000 miles. They've not only proved to be the perfect replacement for old conventional shipping methods, but they've provided additional savings in packaging time, manpower and money. Wartime material shortages gave them a start—top performance assures their continued use.



H&D Post-War Packaging Idea Super-Strength Shipping Boxes

Corrugated boxes pack more economically in railway cars, save about 25% in space. The illustrated example also provides a 20% reduction in package cost, a 25% reduction in package weight and a 20% reduction in handling expense over former methods. You can make similar packaging profits. The H & D booklet, "How to SHIP More Economically in Corrugated Boxes" tells the whole story. Send for your copy today.

Hinde & Dauch
AUTHORITY ON PACKAGING

THE HINDE & DAUCH PAPER COMPANY, 4514 DECATUR STREET, SANDUSKY, OHIO

Factories in BALTIMORE • BOSTON • BUFFALO • CHICAGO • CLEVELAND • DETROIT • GLOUCESTER, N. J.
HOBOKEN • KANSAS CITY • LENOIR, N. C. • MONTREAL • RICHMOND • ST. LOUIS • SANDUSKY, OHIO • TORONTO

THIS IS *Not* THE WAY WOMEN BUY



Due to rationing, women have become more than ever conscious of quality—they look for it in the product and appreciate a package that fully protects against air, moisture, grease and odors. Such a package is Royal's "FLAV-O-TAINER", the patented duplex flexible container that is heat-sealed on all seams and lined with air and moisture resistant films, providing superior protection.

"FLAV-O-TAINER"

—to be available in the following Royalflex films—SELLOFLEX, which is Cellophane laminated to itself or to other appropriate material; LUMINEX, aluminum foil laminated to another appropriate material; PLIOFLEX, pliofilm laminated to itself or appropriate material; DIOFLEX, moisture proof coated glassine laminated to itself.

THOMAS M.

ROYAL

& COMPANY • Philadelphia 20



You can top them all ...with PLASTICS!

● Closure manufacturers everywhere are turning to the versatility of Durez phenolic plastics as the ideal answer to a common problem . . . selecting a material which possesses a range of properties wide enough to permit its use in manufacturing closures of all sizes and shapes—for all purposes.

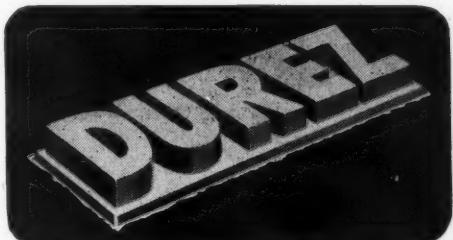
A few inherent characteristics of Durez molding compounds are non-bleeding, eye-appealing finish, excellent moldability, and resistance to moisture, chemicals, alkalies and temperature extremes. These are the qualities which ac-

count for the fact that more closures have been made from Durez than from any other plastic.

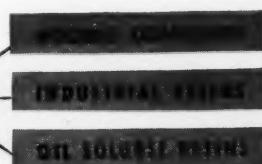
The services of experienced Durez technicians are always available towards helping you and your custom molder solve any plastic material problem which you may have. Durez Plastics & Chemicals, Inc., 484 Walck Road, N. Tonawanda, New York.

TIP ON PLYWOOD CONTAINERS

Combine ease of manufacture with a finished product that has eye-appeal and tremendous durability—and you have the wartime-proven Durez resin-bonded plywood container. The unusual strength, and resistance to temperature extremes and moisture which Durez resin imparts to the rich beauty of plywood, make it a *natural* for the progressive container manufacturer with an eye on post-victory markets.



PHENOLIC RESINS



PLASTICS THAT FIT THE JOB

NASHUA WRAPPERS are a sum*total



Time is the essence of experience — in time, standards are developed, experiments become sound practice and results are forecast by proven methods.

Nashua waxed wrappers had their beginning when sanitation was the only consideration — from that beginning Nashua pioneered the plain wrapper into a modern sales making container.

Nashua wrappers are the product of experience.



NASHUA GUMMED AND COATED PAPER COMPANY
Nashua, New Hampshire

* EXPERIENCE, EQUIPMENT
ORGANIZATION
VERSATILITY, RESEARCH
CONTROL

FLEXIBLE

containers

... their future place of prominence

War has taught many industries how to work together. An excellent example in the packaging field is the Flexible Packaging Institute, formed in August 1943. Co-operative efforts of this kind will be an invaluable aid in future package development, because of the clearing house for technical data and merchandising information thus established.

Members of the Flexible Packaging Institute are the makers of highly specialized bags and envelopes—every type of non-rigid container now designated in packaging nomenclature as "specialty flexible containers" in contrast to cans, glass jars, boxes or folding cartons.

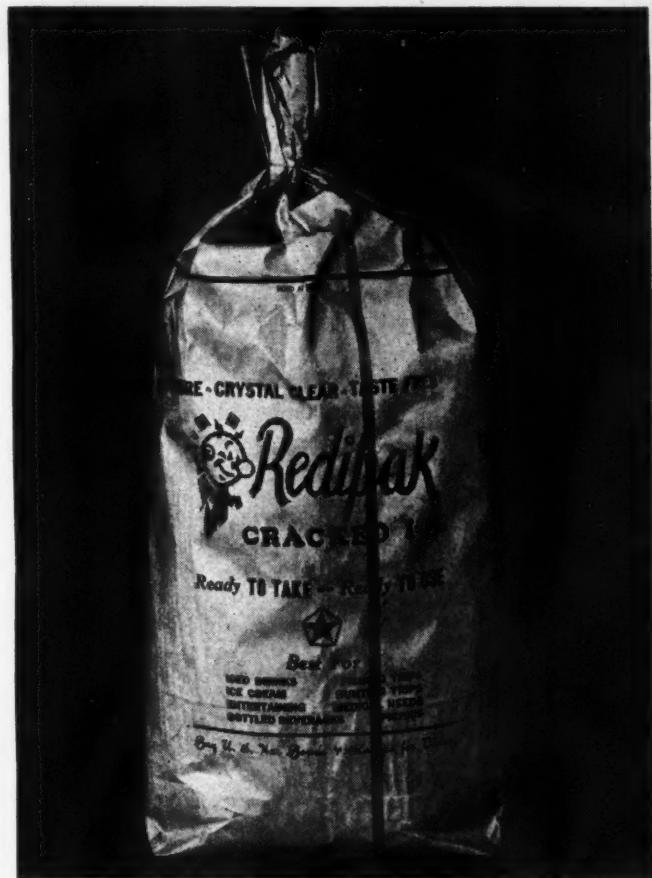
Started as a war baby, this year-and-a-half-old group has charted a future course for the promotion of flexible containers similarly to the way the can manufacturers, paper box groups and glass container industry promote theirs.

Prior to the war, each of these companies who made flexible containers had its individual problems. Each concentrated on converting certain papers and films for limited markets.

When the Government and military authorities began their search for packaging to meet the exacting requirements of overseas shipments, there was no organization to which these agencies could turn for information on flexible containers. There was not even a name or a definition of the industry.

Among the individual companies, therefore, the need for group effort was apparent. It was necessary to pool experience and resources, to eliminate duplication and time-wasting competition. It was also necessary to show the Government what the flexible packaging industry was prepared to do on

1—Carry-out packages for consumer sales of crushed ice offer an excellent post-war merchandising idea for ice manufacturing companies.
2—Specialty bags for shoe repair shop save not only paper but wrapping time, also carry advertising message.





3—Flexible paper container for automobile parts assures complete assembly in branded, tamperproof package.

the basis of what had already been accomplished in the past.

The plan of working together was not easy at first, but the war accomplishments have convinced the 32 member companies, some of whom have been manufacturing flexible containers from 50 to 75 years, of the essentiality of continued teamwork as a means of giving the flexible container industry a definite place in the container field.

Specialty flexible containers differ from the ordinary bags and envelopes in this respect. They are tailored or custom-made to do a protective job. They may be made from any flexible material—paper, cellophane, plastic film, metal foil, or any combinations of such materials to do a specific job for a particular product. They may be made moistureproof, waterproof, greaseproof, lightproof, odorproof, leakproof, siftproof, insectproof, mildewproof or may be provided with any combination of these properties, depending upon the requirements of the product. For civilian use, they differ from ordinary bags in that, in addition to being carriers, they are used as sales and shelf packages. As sales or shelf units they are usually printed in multi-color designs by any of the established printing methods—letterpress, rotogravure, aniline and offset.

Their performance for war shipment is already well known. Flexible containers are protecting food rations, chemicals, medical supplies, munitions, airplane motors, ordnance parts against all hazards of transportation and climatic conditions. Their compactness has saved tons of valuable cargo space. They have been used as replacements for metals and other critical materials.

Future aims of the Institute are to facilitate the education of packers and the public regarding the effectiveness of flexible containers for specific products, such as frozen foods, machine parts, etc., and as light-weight packages for air freight.

It is estimated that the industry produces annually \$100,000,000 worth of flexible containers. It is the aim of the Institute not only to retain business gained during the war as replacement for other types of containers, but to develop new uses. Containers developed as the result of wartime needs but not now available for civilian use will also be publicized after the war.

Officers are: president, Gordon H. Friend, vice-president,

Thomas M. Royal & Co.; executive secretary and director, J. A. C. Kavanagh; chairman of public relations committee, E. M. Rickel, assistant director of specialty sales, Union Bag and Paper Corp.

One of the first steps in the long-range plan was the appointment of Charles F. Roos, economist, to conduct an intensive research program.

Dr. Roos is working on studies in merchandising trends, product trends, markets for flexible containers and competition from other containers. He is approaching the problem with a complete demand study to analyze economic conditions as related to flexible containers. Through this he aims to prepare a formula to measure the estimated demand for such containers. This is being done on the basis of purchasing power for consumer goods. By knowing the demand for consumer goods, it will be possible to anticipate the demands for flexible containers.

Another service of the association is one of much practical value from a styling standpoint for the packager who is looking into the advantages of various containers for his postwar market. By making known new uses for flexible containers in specialized lines, the association thereby suggests other end uses to product manufacturers that not only promote new conveniences in packaging, but show the profit possibilities of merchandising in a package products that have never been packaged before.

Following are a few examples:

Packaged ice

Carry-out packages for consumer sales of crushed ice offer a new postwar merchandising idea when paper is again available in unlimited quantities.

Ice companies are rapidly awakening to the fact that the sale of crushed or cracked ice is profitable, largely new business, improves the service of a company, helps dispose of broken ice, creates new markets at a "high revenue" sale. There are 6,500 ice manufacturing plants in the United States, all of which are potential users of these bags.

The availability of cracked ice in containers supplies large commercial customers with additional cracked ice when

needed. Such containers also make convenient units of sales for the smaller commercial users, such as hotels, bars, restaurants, soda fountains and hospitals. Packaged crushed ice is in demand for use in the home as well as for social functions and picnics. Sales are heavy on Saturday nights and Sundays. Quick consumer service may be given at the ice plant or distributing stations when the ice is pre-packaged.

The bags may be filled and placed on shelves in the vaults by the vault man or platform man in advance of sales during the time when employees are least busy. They may be filled with crushed ice by hand with the aid of a scoop and are closed either with string or wire tie. Printed, they offer an excellent advertising medium.

Bags for this use are generally satchel bottom, sometimes square construction, duplex, a superkraft or wet-strength outer sheet with a waxed-kraft inner lining. Total basis weight, properties of the two sheets and the use of moisture-proof adhesives impart strength and moisture protection to these containers. They offer a low price throw-away container without troublesome deposits.

Automobile parts bag

The automobile owner in the past has not always been sure when he left his car for repairs that he was getting a complete set of parts of the particular make he specified. Specialty flexible containers have been designed to provide tamperproof bags for such parts which can be factory packaged and unopened until they reach the consumer by way of the service station.

Many different styles and sizes of such bags will be made after the war, designed for the parts that are to be packaged. Fig. 3 illustrates a bag that has been used for gaskets, many of which are made from cork. These gaskets will retain their moisture content for a reasonable period of time, but as they

are often stocked on dealers' shelves for long periods, it is necessary that they be protected from loss of moisture to prevent brittleness and shrinking. A specialty container offers this protection by means of a special lining.

Bags of this type are used by large manufacturers of machine and automobile parts for a set of component parts going into one unit or for one individual part and are prepacked and shipped all over the country to the various sales and service outlets in corrugated containers.

Printing on the bags makes the identification of the parts contained simple. Where more than one part is contained in the bag, a listing of the various parts assures the purchaser or the service repairman that he is receiving all the parts necessary for the repair.

Printing is also used to give directions for assembling parts, as depicted in Fig. 3 by the drawing showing the complete assembly of all parts in the bag. The bag shown is flat construction duplex, with a kraft outer sheet and a special asphalt-treated kraft inner lining.

Meat bags

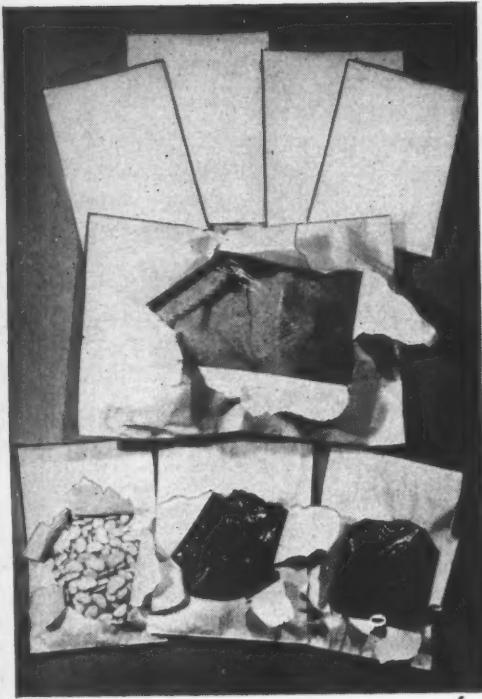
More and more meat will be packaged after the war and the duplex bag, kraft outside with waxed-kraft lining manufactured with moistureproof adhesive, has an interesting future for this purpose. Meat packers have already used special duplex bags to some extent for products such as frankfurters, meat loaves, specialty cheese loaves, etc.

The bags are packed at the meat processing plants and shipped by truck to butchers, delicatessens, restaurants, etc.

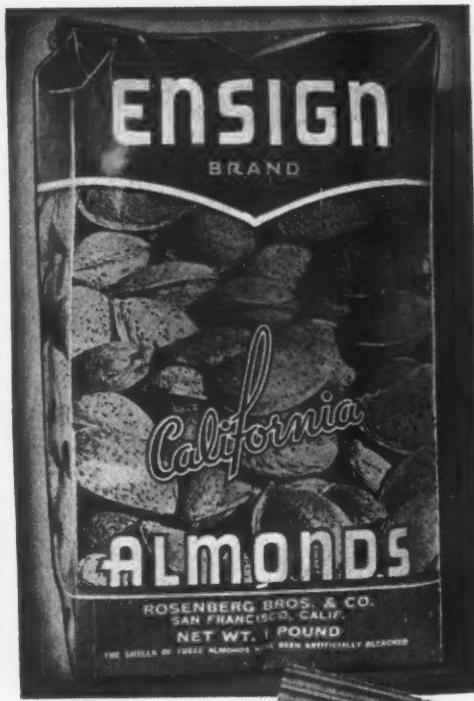
Printing on the bags provides easy identity and also emphasizes the packer's name and brand. Special coating of the inner liner imparts greaseproof properties. Since the meat products have a tendency to "sweat," the bags are very often provided with holes punched in them to permit evaporation of

4—Natural kraft bag gives effect of bleached stock when printed with white background. 5—More and more meats, specialty cheese loaves, etc., will be packaged in protective kraft bags. Holes permit air circulation.





6



7

6—Wet-strength paper and moistureproof cellophane combinations will be offered for home freezing units and locker plants. 7—Lifelike reproductions by rotogravure or half tones will be more widely used in duplex constructions. 8—Coffee bags after the war will be made of paper in combination with a number of protective films.

excess moisture. Under refrigeration, the holes permit circulation of the refrigerated air within the package.

Shoe bags

Shoe repair shops customarily wrap each customer's shoes, after repairs, in a piece of wrapping paper, tied with a string. When the paper shortage loomed, one of the members of the Flexible Packaging Institute suggested the idea of using a specialty bag for this purpose in place of the wrapping. The bag not only saved considerable quantities of paper in comparison with the wrapping, but saved string and the time of the shoe man to wrap the package. By this improved method, all the shoe man had to do was place a pair of shoes in a bag and the package was ready for the customer to take out.

This packaging idea, born as a wartime conservation measure, is expected to continue because of its convenience. The bags also offer an advertising medium to the maker of shoe repair accessories such as rubber heels and soles, who can supply the bags to shoe repair shops, printed with advertising sales messages plus the name and address of the local dealer.

Coal bags

Another interesting use for a specialty flexible container, not readily available now due to the paper situation, is a bag for coal. The coal dealer can pack his coal in these bags, containing just the proper quantity for the average stoking of a home furnace. The consumer would receive his entire fuel supply packed in such bags, instead of loose from truck to cellar as it is now delivered in most cases. The home owner, to stoke his furnace, would simply throw one or more bags into the furnace as required. All the dirt incidental to the storage and use of coal in his home would be eliminated, because all the coal he used would be packaged. At the same time, printing on the bag would advertise the dealer's product.

Frozen food bags

Excellent laminated glassine and wet-strength kraft bags with heat-sealed bottom and heat-sealing bands at the top have been used for institutional-size frozen food packs and offer an economical future container in this field.



8

For home freezing units and the locker plants, parchment bags, wet-strength kraft bags, lined with moistureproof cellophane with all seams welded by heat, will be available.

The bags are flat and stack well when filled. They are easily heat sealed with a hot iron, which makes them airtight, moisture-resistant and greaseproof. Wet-strength paper prevents disintegration upon defrosting and offers strength for handling. The turned-up heat-sealed bottoms prevent leakage and the contents are said to be protected against dehydration and freezer burns.

Coffee bags

Duplex coffee bags after the war will be made from paper combined with not only cellophane but with specially coated papers and plastic films, now unavailable, to give better protection to flavor and contents. Rubber-derivative films will also be on the market again for the purpose.

Coffee bags of the type illustrated for La Touraine coffee are known by the patented trade name of "Flav-O-Tainer," which identifies a particular construction. Special cutouts are made in the outside wrapper both at top and bottom of the package. By this construction, the thermoplastic liner may be

heat sealed always to itself in forming the seams for the bottom of the bag. The cutouts at the top facilitate the closing of the bag by means of heat seal after it is filled.

The bags may be automatically packed by a machine which feeds the coffee into the package in an atmosphere of carbon dioxide gas to eliminate a large percentage of air.

With pliofilm liners the "Flav-O-Tainer" bag was also offered as a frozen-food locker bag before the war. These bags were made with side tucks or bellows. The bags, however, were taken off the market for this purpose for the duration but, it is expected that they will be brought out again after the war.

Special uses

There undoubtedly will be many uses for small bags, such as the illustration showing the half-ounce packet for dehydrated red peppers. This convenient container combines two sheets of opaque glassine with cellophane in between and a heat-seal top and bottom.

Institutional size flexible containers have been used as replacements for the packaging of Royal gelatin. These triplex laminated glassine packages should also find many future applications for shelf packaging of food products.

Design is also an important factor in the consumer flexible package. There is opportunity for very interesting treatment. The duplex bag, a 50-lb. super-calendered bleached-kraft outside wrapper with natural-kraft inside liner, illustrated for Ensign Almonds was a replacement for cellophane. When the packer could no longer show his product by visibility packaging, he pictured it as accurately as possible on the opaque container. This pictorial treatment might be used in

9—Heat-sealed, laminated glassine and wet-strength kraft bags make convenient, economical containers for institutional-size frozen food packs. 10—Triplex laminated glassine containers adopted as war alternate for institutional-size gelatin packages will find many postwar uses. 11—Many uses are being suggested for small packets like this one for dehydrated peppers, made of two sheets of glassine with cellophane between.

11



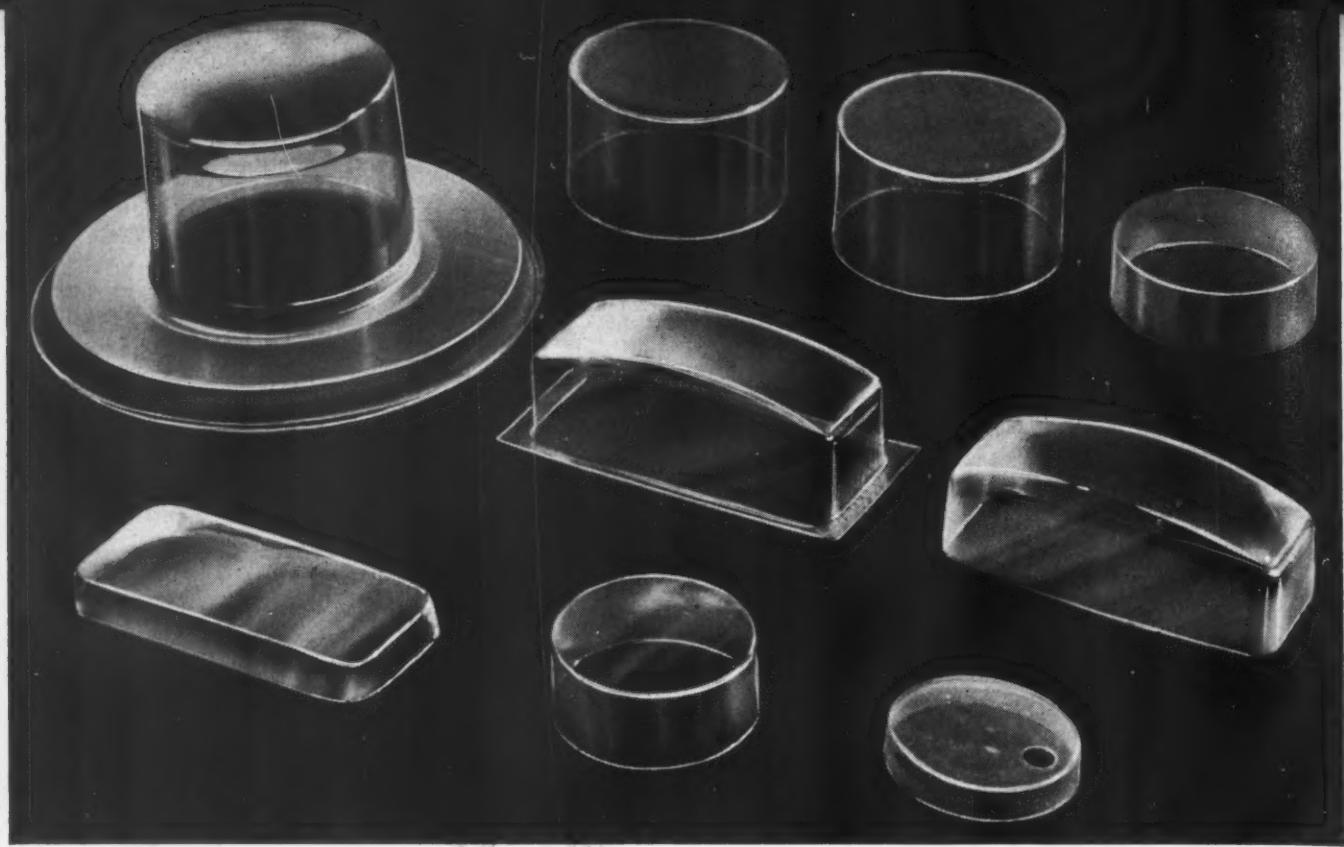
many cases where a visibility package is impractical, yet where attractiveness of design is all-important. The bags may be printed either by rotogravure or with half-tone plates for natural, lifelike reproductions. Such printing for duplex construction in the past was quite rare, but because of the attractive results will most likely become more common.

The examples cited above indicate only a few of the future opportunities of flexible packaging. Machinery available after the war for high-speed filling and sealing of such packages will also help to solve many heretofore difficult packaging problems. The Flexible Packaging Institute will be a central source, where the product manufacturer can obtain, through the New York headquarters, 369 Lexington Ave., answers to every question pertaining to flexible containers.



10





1—Today, ammunition components; tomorrow packages—reproduced on fully automatic drawing press at 90 per min.

Automatic drawing of transparent containers

Fully automatic machines for the production of transparent plastic containers by the drawing method are in operation today in the Newark plant of the Celanese Plastics Corp., turning out up to 90 pieces a minute.

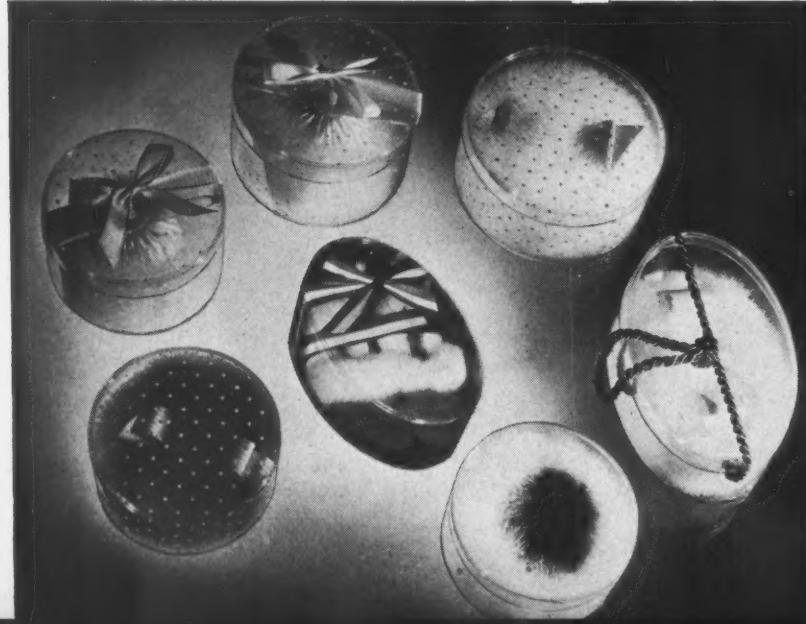
These machines are a direct outgrowth of a demand for war material. When the Ordnance Departments of the various services sought to place contracts for ammunition components, they found no one equipped to produce on a mass-

production basis. So Celanese engineers set to work developing a machine, with the result that the component production, which has run into many millions, has kept pace with other parts of shells and ammunition.

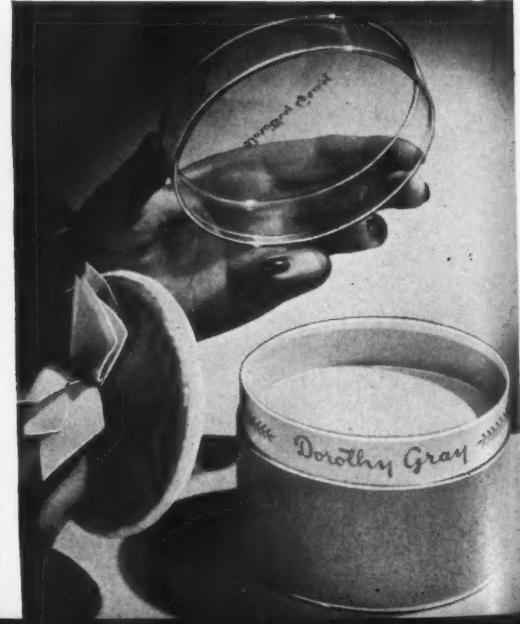
While present production is concentrated on ammunition components made of nitrocellulose, trials indicate that the machine will operate equally successfully on cellulose acetate, ethyl-cellulose, or any thermoplastic sheet. License for manu-

2—Transparent packages can be produced on postwar machine at drastically lower cost. 3—Drawn transparent lids, which may be decorated as desired, will be a big field of use for the new drawing press.

2



3



facture of the machine has been granted to a New York machine firm,* and it will be available to the packaging field as soon as war restrictions permit.

Machines of the size now in use will draw containers up to $3\frac{1}{2}$ in. in diameter and with a draw ratio of 1 to 1. Diameters up to 12 in. are said to be entirely feasible, requiring merely a machine of larger dimensions and it is expected that the draw ratio also will be considerably increased in later models.

Automatic manufacture of transparent plastic containers has long been expected as an early postwar development. Several companies have been working on machines for both drawing and set-up operations, but the Celanese machine is the first to be announced as having been proved in large-scale operations.

The cost potential in automatic manufacture is most interesting. Not only does the Celanese machine produce at a rate more than four times as fast as the best semi-automatic methods, but it has been found that one unskilled girl operator can supervise from four to six machines. Thus, production per operator has been boosted from a prewar level of 10 pieces per minute to as high as 400 or 500 pieces per minute.

If this saving in labor cost is combined with a substantial cut in material cost after the war, it appears that the transparent container will approach the price level of the average set-up paper box.

The new machine, designed by René Pipperoux, chief development engineer of the Celanese Corp. of America, and his assistant, Dmitri Soussloff, is covered by patent applications. It is essentially a mechanical duplication, by means of a cam-action press, of the actions of hand drawing, although some ticklish problems of heat control and synchronization had to be overcome. Ten of the machines, all built in the Celanese shops, are now in operation in the Newark plant; each incorporates minor improvements over the preceding model, but all are similar in appearance and identical in principle.

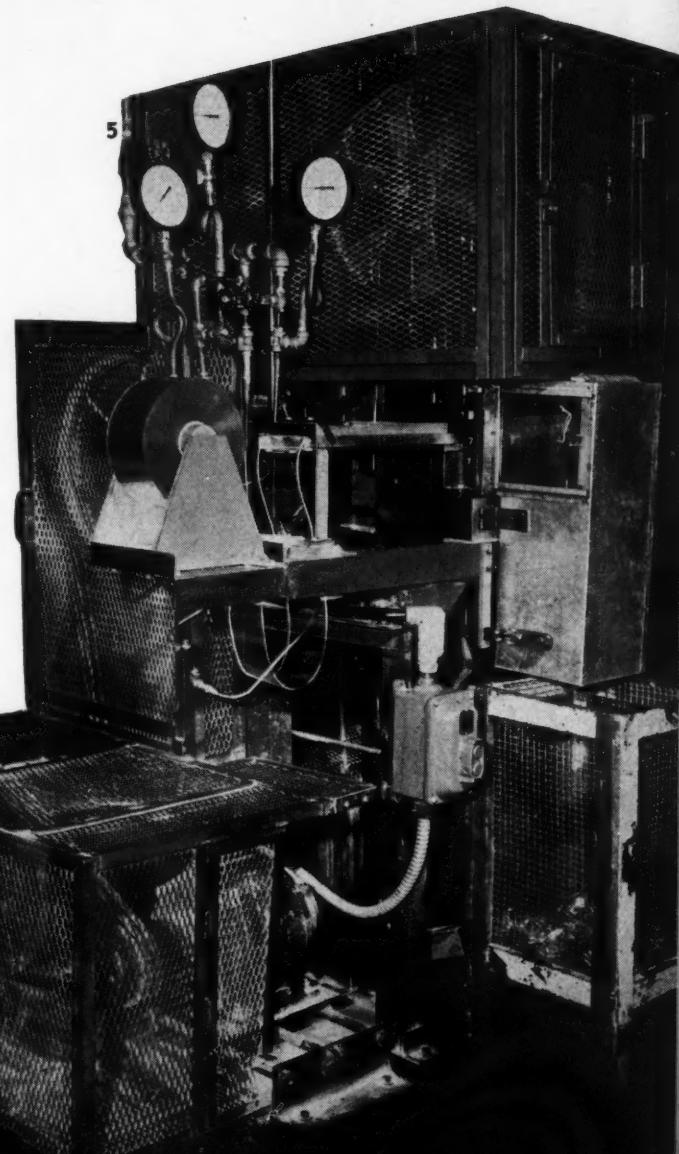
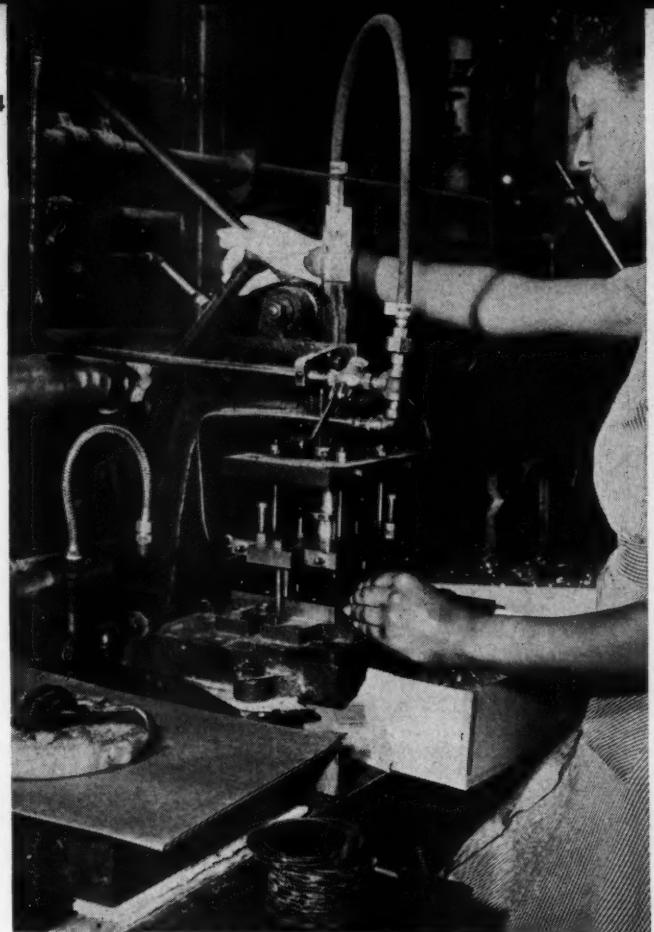
Every available piece of equipment is in operation on the ammunition-component order. Hand presses and semi-automatic presses are working alongside the new automatic machines. Hence, the Newark plant provides a good picture of the step-by-step development to the fully automatic machine.

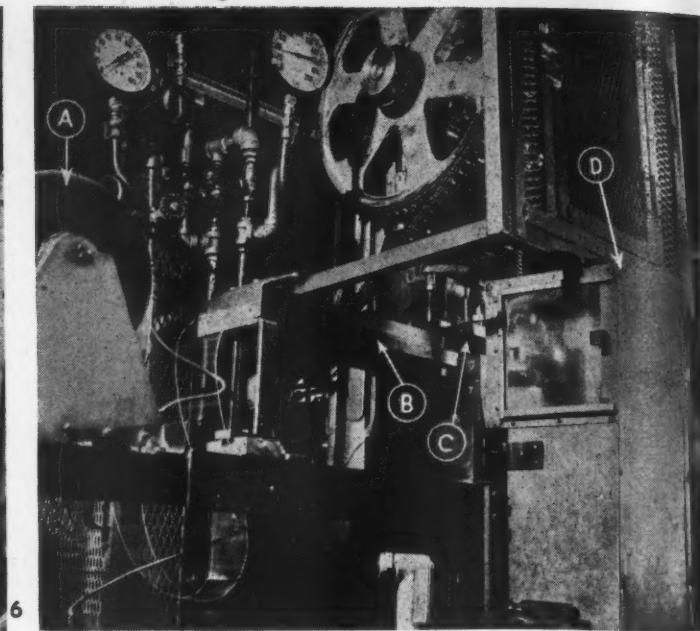
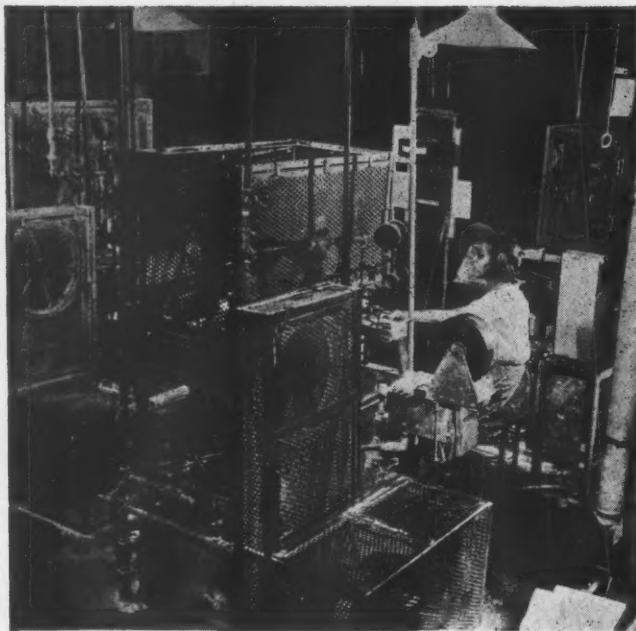
With the old hand press (Fig. 4), die-cut discs of the material are fed by hand into the drawing dies (after preheating on an electric plate if the stock is fairly thick) and the stroke of the machine is activated manually. Average production with this method is 3 or 4 pieces a minute and 6 to 8 a minute is considered tops.

The first improvement was an automatic Hitch feed that takes the material from a roll, passes it over a plate for preheating where preheating is necessary and then into the dies. In this machine (Fig. 5) the piece is cut off in the die at the instant it is fully drawn, so that it gives the appearance of

*F. L. Smithe Machine Co., Inc., New York, N. Y.

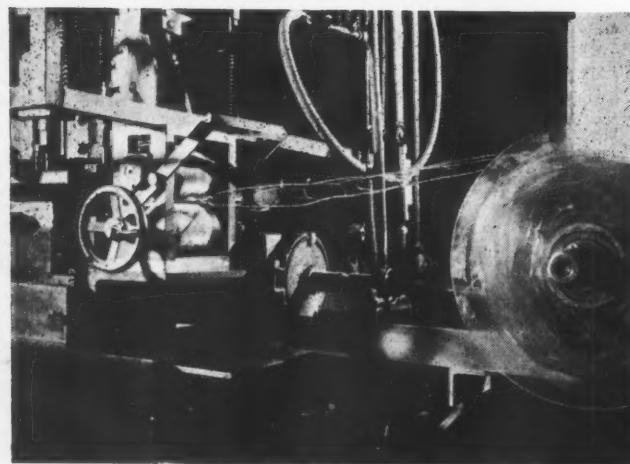
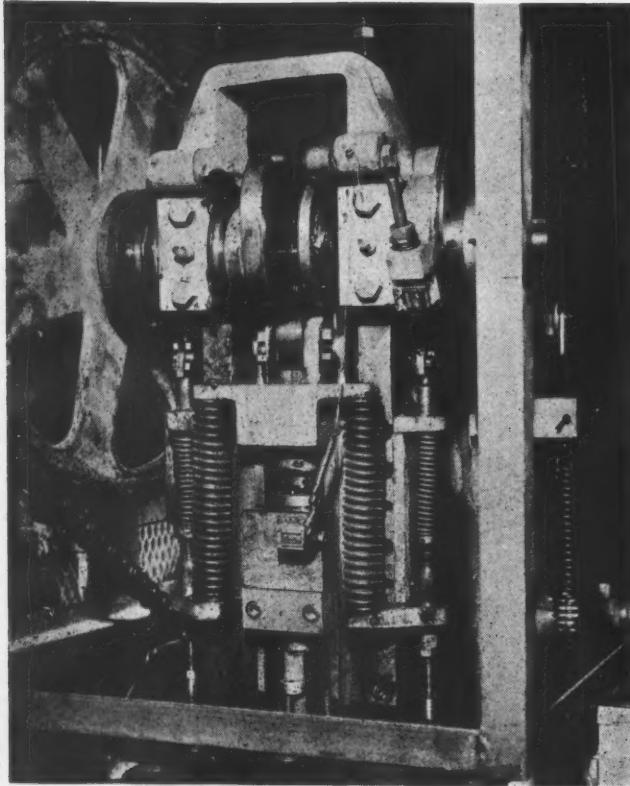
4—Original hand drawing press requires foot and hand operation by operator and separate pre-heating (left). 5—Developed to meet war needs, this is called first fully automatic machine for drawing plastic containers. Material feeds from roll; completed parts drop into screened hopper in lower right hand corner.





9

6—In the new setup in Celanese plant, one operator tends four automatic high-speed presses. 7—Close-up of cam gears, which duplicate delicate double-hesitation movement of manual drawing action. 8—Close-up from right front shows pierced strip emerging from rollers to rewind roll. Scrap material is melted and re-used. 9—Close-up from front left shows roll (A) feeding strip of material; pre-heater (B) and dies (C) in which drawing is done. Completed parts are blown out and down through chute (D). Housing is removed from top to show chain drive.



8

simply stamping the parts out of a belt of material. Completed parts may come from the top or bottom of the die, depending on their shape, but must be removed by hand. It gives an average production of 16 to 18 pieces a minute.

In a later model, a further step toward automatic operation was taken when air jet ports were added to the dies so that parts ejected from the bottom of the die could be blown out. This increased production to 20 pieces a minute, but the machine still required an operator to pull down the drawing lever with skillful timing of the "double hesitation" movement to permit heavy stock to draw gradually.

When it appeared that war orders would be far beyond the capacity of their existing equipment, the Celanese engineers rigged a machine to duplicate in cam action the delicate double-hesitation movement of the manual stroke. This is the real secret of the automatic machine. Production of 54 to 55 pieces a minute was quickly achieved and later a pace of 90 a minute was reached. Celanese engineers predict that 120 a minute will soon be attained.

The ammunition components currently being produced are of various sizes and shapes, but most of them are similar in size and appearance to telescoped pill boxes. One item is rectangular with rounded corners and a flanged edge—a deep draw of a difficult shape, successfully handled on the automatic machine. The ammunition items are of nitrocellulose because, of course, high flammability in this case is desired.

The material is fed from a roll. Not only is there a pre-heater plate, capable of providing any necessary preheating temperature, but the dies and hold-down plates also can be heated to any desired temperature. As the belt of material enters the dies, zinc stearate (Continued on page 176)

Sterile sealed

... aluminum vials and envelopes

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Direct blood transfusions, given in the heat of battle, are usually of an emergency nature, accomplished under difficult conditions, with no opportunity for sterilization of equipment.

This throws a heavy burden of responsibility on the packager whose job is to see that blood donor and recipient sets not only are packed under completely sterile conditions, but are kept sterile up until the time they are used.

A practical solution to this problem is seen in the two types of packages shown in the accompanying illustrations. One of these consists of a special heat-sealed aluminum foil envelope developed for Army use. The other is a semi-rigid-walled aluminum container intended also for Army service. Both types of packages are currently being used by Baxter Laboratories, Inc., for both donor and recipient sets. They suggest many postwar uses where the same sort of sterile protection is desired.

Each package contains a blood donor or recipient set and a printed sheet with complete instructions for proper use.

The foil envelope is opened by tearing open the end. The vial is opened by means of pressure of the thumb nail along a scored line near the top.

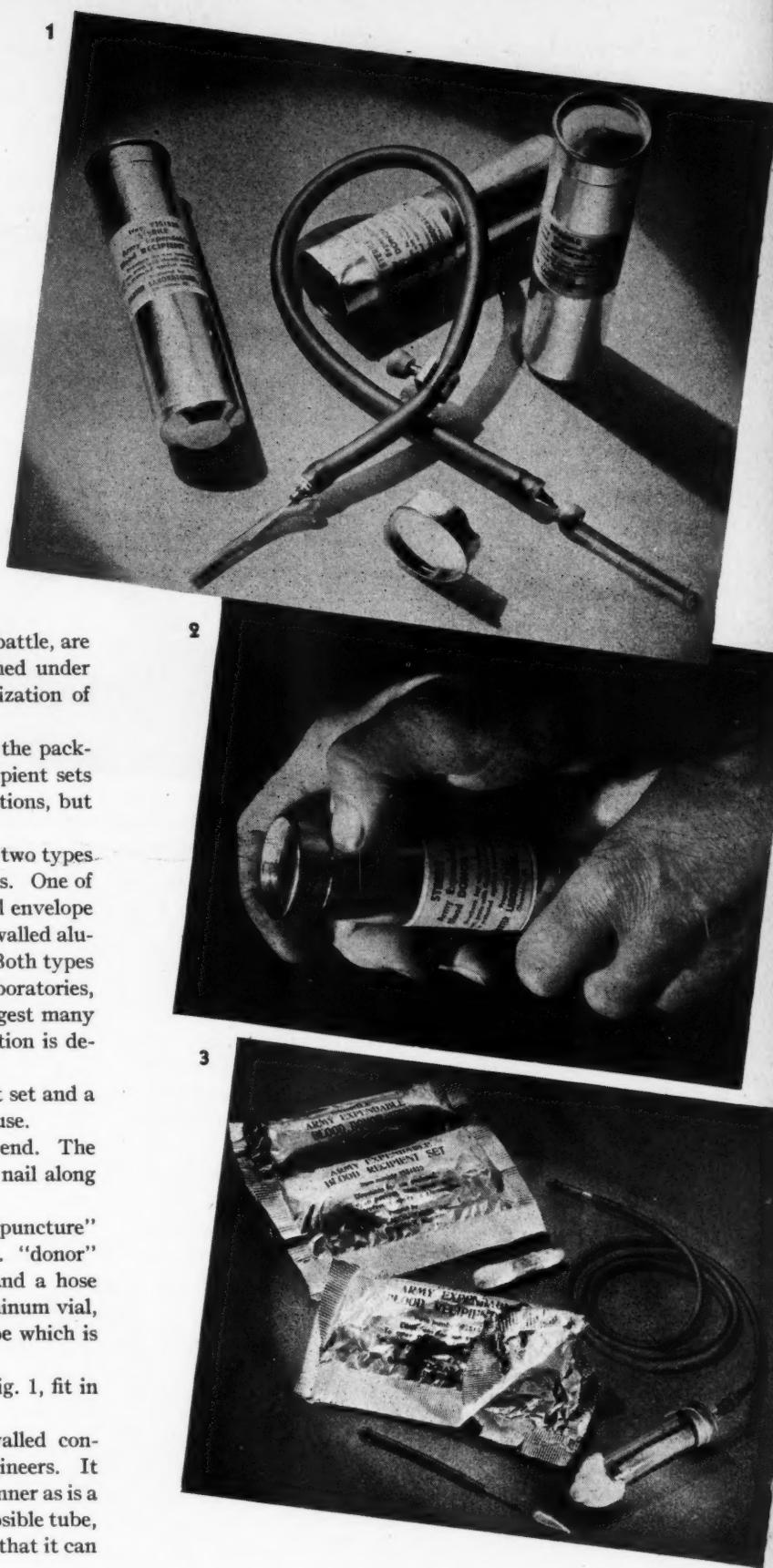
The donor set (Fig. 2) contains a 16-gauge, 1-in. "puncture" needle in a rubber sleeve; a 17-gauge, 1½-in. "donor" needle in a glass vial; 12 in. of rubber tubing, and a hose clamp. All this is compactly packaged in the aluminum vial, which is less than 6 in. long, or in the foil envelope which is about 3½ by 6½ in.

The contents of the recipient set, as shown in Fig. 1, fit in identical containers.

The tube is an adaptation of the semi-rigid walled container developed recently by Alcoa packaging engineers. It is formed by impact extrusion in much the same manner as is a collapsible tube. The container differs from a collapsible tube, however, in that its walls are much stronger and in that it can be given an hermetic seal where necessary.

The envelope is made from 0.001 aluminum foil coated with a vinyl-type resin. The foil is, in turn, backed with 40-lb. kraft paper.

CREDIT: Tubes and foil by Aluminum Co. of America, Pittsburgh. Foil envelopes laminated and printed by H. D. Catty Corp., New York, N. Y.



Cosmetics

...postwar revolution or evolution?



1—Prince Matchabelli wins the 1944 T.G.A. Packaging Award for Duchess of York Chinese ceramic jar and plastic rouge container. The line is noted for simplicity of design, attractive color scheme.

To the average woman, the cosmetic counter is a dream world—a place where dreams come out of a bottle, a jar or a box. In her fancy, a bottle of perfume will make her daring as a Hollywood siren! A jar of face cream will make her skin soft as a baby's! A box of make-up will restore the bloom of youth—or give her a make-believe sun tan! From a bottle she can change from brunette to blonde to red-head and back again!

And she loves it all to the tune of more than \$500,000,000-a-year industry.

Behind this happy realm of make-believe is one of the most realistic packaging developments in American industry. In its recent report, the Packaging Committee of the Toilet Goods Assn. states this realistic aim bluntly:

"Numberless surveys have laid low any possible doubt as to the relationship between package appeal and sales. Sales increases have been known to exceed 500% when an old, familiar package was replaced with a new, more attractive package whose design embodied the psychological allure known so well to specialists in that field."

Proceeding on this premise, the committee forecasts just as realistically in its report the possibilities of postwar packaging in the perfume, cosmetic and other toiletry preparations industry.

The report, which covers thoroughly the packaging materials situation as well as the toilet goods manufacturers' reflections and hopes for the future of their industry, is a striking example of how a trade association can do a real job of spade work in obtaining packaging information for its members.

The report cautions against some of the prevalent blue sky

thinking that can mean only disillusionment. It proves in statement after statement made by material suppliers that cosmetic manufacturers should not get their hopes too high for a complete package revolution the moment the war is over. The need, the report emphasizes, is to get back to quality workmanship and to get rid of inferior substitutes that may impair consumer acceptance. Of prime importance will be the relaxation of government controls, which will assist the tremendous job of reconversion. It will be difficult for a time to do better than to return to prewar packaging, the report says; the application and development of new ideas will undoubtedly take some time.

Illustrations accompanying this article all show entries in the Toilet Goods Assn.'s Package Competition, held this year for the first time. The winner receives the Charles S. Welch Memorial Award for the best package launched during the year 1944. Two important provisos had the effect of considerably reducing the number of entries—one, the restriction of entries to the current year; the other, that packages be legally labeled.

As we go to press, word comes from the T.G.A. that the award has been given to Prince Matchabelli, for its ceramic container for foundation cream and its plastic rouge container. These may be seen in Fig. 1, on this page.

Some manufacturers feel that their reputations were made on their prewar packages and that it is sufficient to return from substitutes to prewar smartness. The important factors concerned are eye appeal, consumer preference, substantiality and package performance.

The committee further indicates that the psychological effect of the war and the great fever of expectation for new packages should, however, be an influence for the good in influencing "reigning executives" to listen a bit more attentively and appreciatively to the story that the packaging specialists have been trying to tell them for years.

Tradition has been said to be the enemy of progress and if it took a World War to bring about this new interest in package design, it is hoped that there will be executives with the confidence, vision and capital to adopt new ideas.

Members of the committee represented six cosmetic and toiletries houses, two plastic molders, three paper box companies, a glass company, two important producers of lipstick and compact containers and one import printer of labels.

They were A. H. Bergmann, Oxzyn Co., chairman; A. A. Alter, Houbigant Sales Corp.; H. H. Boscowitz, F. N. Burt Co., Inc.; Gertrude Brows, Jacqueline Cochran; A. C. Burgrund, Carr Lowrey Glass Co.; B. F. Conner, Colt's Patent Fire Arms Mfg. Co.; Sewell Corkran, E. N. Rowell Co.; P. L. Forsman, C. H. Forsman Co.; I. L. Ferris, Bridgeport Metal Goods Mfg. Co.; Edmund Grunig, Dana Parfums, Inc.; A. D. McKelvy, Alfred D. McKelvy Co.; J. I. Poses, A. A. Vantine Products Corp.; L. R. Root, Scovill Mfg. Co.; S. Schwartzman, Harry Broder; Karl Voss, Karl Voss Corp.

The following summary of their forecast gives a fairly good picture of what the cosmetic packager may look for in immediate future and later postwar packaging, and offers an excellent guide for procedure.

Fancy boxes

Box makers predict a return of all the attractive prewar containers in the cosmetic field with probably slight changes in design. Face powder, they say, will go back into round containers because of the ease of handling and closing. Such

—Very successful from a topical promotion standpoint is Dorothy Gray's Treasure Chest tied in with the book promotion of "Frenchman's Creek." 3—Interesting family design treatment of over-all wrap for Jacqueline Cochran.



boxes will have cellophane drums suitably printed. Combinations of paper and transparent plastics are contemplated for restyling. The paperboard containers for talcum powder, it is believed, will hold their own against time, particularly because of laminations and highly glossed coatings that will be available for decorative labeling. Metal bottoms, however, are suggested in combination with paper as an alternative. Baby powders and dental powders, it is also believed, will continue in such containers.

Gift boxes for holiday combinations will be made in combinations of plastic, plywood, specially impregnated and plastic-surfaced liquidproofed board. Colored and natural aluminum foils will be laminated to papers, and there will be interesting satin and plastic interiors to set off jewel-like bottles and jars.

Cellophane and other transparent films will be used widely for windows in cartons.

Paper caps for jars and bottles will be doomed.

Transparent packaging will play a prominent role, and the aim is to make rigid transparent containers harder to withstand the shocks of present-day merchandising. The report, however, does not make mention of the recent important developments in high-speed drawing of rigid transparent containers (see page 94) which will make them lower in cost and available in large quantities. Another development in the transparent container is the spiral wound-tube (see MODERN PACKAGING, March and April, 1945).

Glassware

Bottle and jar men advise the cosmetics industry to keep using prewar styles, and say they will be ready soon after the reconversion period to produce private as well as stock molds. Only time, labor and metal will be required for making the new molds.

The perfumer may expect to obtain hand-made glass in America. Even before the war strides had been made in this country in fine cut crystal and, while the hand-made glass industry has lost many of its experienced glass blowers,



there are enough to continue operations and more will be trained. Many fine craftsmen from the best European "crystaleries" have also come to America and many will stay.

Metals

Makers of metal lipsticks, rouge containers and vanity compacts suggest a return to prewar lines until such time as toolmakers for this type of manufacturer are back on their regular jobs and metal is released in sufficient quantities to supply demands. This does not preclude immediate postwar changes, such as lettering, but basic changes where new shapes and constructions are involved such as a one-hand lipstick case that has been predicted.

It is a unanimous opinion that the majority of lipstick containers, vanity boxes and rouge containers, made from other materials for the duration, will revert to metal. Brass will continue as an important material, with many new methods of finishing applied.

Because of the tremendous wartime expansion of aluminum, this metal will undoubtedly find many applications in the cosmetic and toiletries field.

Metal will also be continued for many jar and bottle caps, with exposed threads, concealed threads and slip caps of every description.

Metal will be used for dispensers and novelty items. Plastic ornamental parts will be combined with metal. Decorated metal jar caps will be used in higher-priced lines, while plastic caps will continue widely in moderate-priced packs.

Metal powders, molded not unlike plastics, have been suggested as a new idea for some brave and venturesome manufacturer. These would have interesting possibilities for combinations of more than one metal powder for the decorative effect that might be obtained.

Plastics

Many wartime difficulties in the plastics field, the report states, were due to forced use of plastic powders not adapted to the purposes for which they were used. This has been as

4—Hewitt Soap Co. makes display cards with same plates as used for top panel of its Shower Bar package. 5—Distinctive opaque bottle from California. 6—Pinaud's new stylized floral design for powder box. 7—An overall Chantilly lace pattern gives a name, a box and wrapper to Houbigant's bath tablets. Unusual box construction permits arrangement of bath tablets in two layers.

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much the fault of the cosmetic industry as the makers and molders of the materials. All wanted containers of some kind and tried things out with little experiment.

Lipsticks and make-up items suffered most in plastics. And it was learned that it pays to use the "know-how" engineering of good molders to obtain satisfactory containers. There was an excess of sweating, in connection with lipsticks, and some of the best lipstick perfumes became contaminated.

"The chemistry of plastic powders will have to be investigated thoroughly for the continued use of these plastic materials for lipsticks," the report states. However, the committee indicates that there will be a lasting field for the plastic lipstick on toilet goods' counters.

"Moreover, postwar plastic materials such as polystyrene, vinylite, ethyl cellulose, melamine and others, with their greater tensile strength and dimensional stability, will permit of thinner wall sections and allow manufacturers to streamline their containers and overcome the one remaining objection, that of size," the report says.

In a mention of make-up compacts of plastic, the report cites the trouble with warping, particularly when the make-up had to be compressed directly into the containers. Due to dimensional instability, the compacts cracked and withdrew from the side walls—or rather the plastic withdrew from the cosmetic. "Better results were obtained when metal was released for bases and the compacting was done on these pans. However, the problem of closures still exists," it is said, "because the lids and bottoms warp differently and it is difficult to get an entirely satisfactory closure." Climatic conditions and unsatisfactory basic molds also enter the picture. Plastic chemists are advised to put more research on this problem because "definitely, the container of the future make-up compact must be of plastic materials." Plastics, too, will continue to play an important role for dry rouge and cream rouge containers. However, problems are of a lesser degree.

Further indication of the part plastics industry will play

was indicated from another source recently. One molding company forecast 20 million pounds of thermoplastics a year for cosmetic jars and other containers.

One of the committee's experts prepared in detail the advantages and disadvantages of each of the plastic materials.

"If cost is disregarded," he says, "there is probably a good plastic for any application in the cosmetic industry. We all recognize the fact that not all plastics are good for every application."

He mentioned the blown type of plastic bottles as possibilities for cream containers, particularly in view of improvements in molding compounds. He mentioned the manufacturers who have under construction experimental molds in this field for testing purposes. The favored material is polystyrene and lower prices of the material are forecast when improved machinery for producing larger quantities of the compound are available.

Particularly reference is made to possible reduction in the price of methyl methacrylate and the new methods of fabrication learned during the war. This material will be available in transparent colors as well as crystal clear.

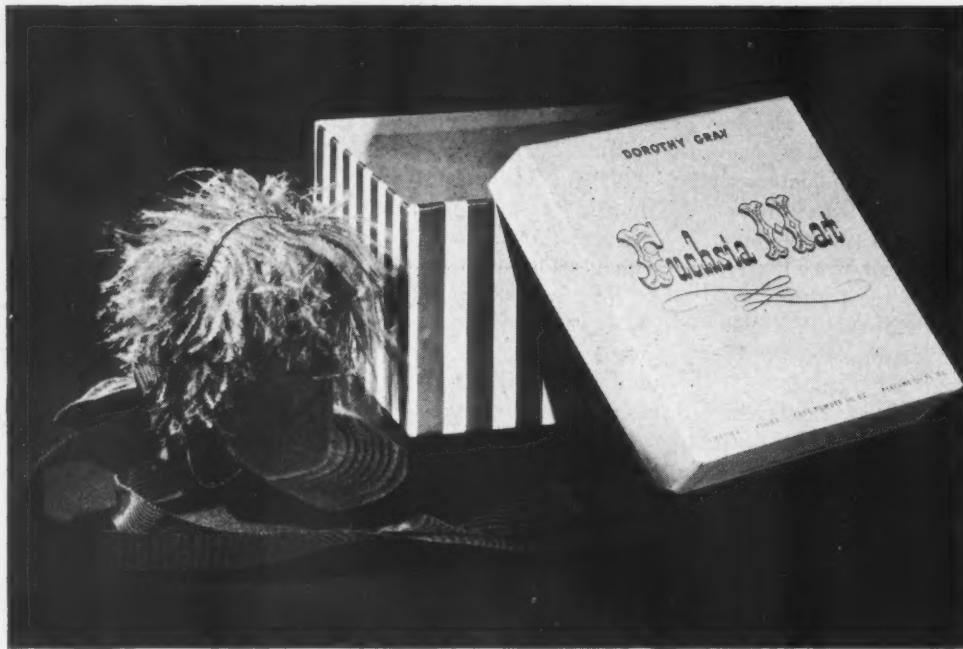
"For those who desire packages or parts of packages of transparent, colored, glass-like material," he says, "but do not wish to stock up dealers or themselves with a variety or assortment of colored packages, a new dye has been developed which will permit the end result without the inventory. The material can be readily dyed, and so a stock of crystal items could be tinted in accordance with the demand created."

The report further indicates that nylon as a molding compound is in a very experimental stage and does not have as good moisture resistance as some of the other molding compounds. It is expected, however, that future compounds in this family will be improved in both these respects. Also the price is high and it is questionable how low it can go after the war.

Polyethylene, used mostly to date for wire covers and which

8—Daggett and Ramsdell joins the parade of plastics with a pink compression molded cake make-up case of urea formaldehyde. 9—A daring trend is forecast by Schiaperelli's Salvador Dali designed powder box.





10—*There's always a place on the cosmetic counter for the one-time gift novelty. Dorothy Gray's Fuchsia Hat box contains tiny felt hat in which are concealed a combination of items—frou-frou appeal in heady color.*

may be injection molded easily, is among the other newer materials mentioned. It is expensive at the present time but should be available in colors of exceptional brilliance. It is a flexible material at room temperature and requires careful molding if close dimensions are required in order to avoid shrink marks in every cross section. Where the tolerances are close it may not always be possible to switch from some other thermoplastic material to polyethylene, or vice versa, because of the difference in shrinkage factors. It is available also in the form of tubing, rods or sheets. Films and sheetings can also be secured, which may suggest its use for some unusual cosmetic packages. Blowing this compound, from sheet, into odd and unusual shapes is also being considered as a definite possibility for the future.

Label-paper situation

Many new papers and printing materials are forecast for postwar labels and labeling, but these are not expected to be available for mass production until a year or two after the war, although a sufficiency of good materials and designs will be available to carry over.

American fine-color printers and lithographers have not only the best designing brains in the graphic arts field, plus those who have escaped the ravages of Europe, but also the best present-day technicians.

America may be taking over the lead in this field once held by Europe, particularly Paris. It will be a long time before foreign manufacturers can reorganize personnel and repair and replace damaged equipment; however, there are some who believe that "America did need Paris for the subtle nuances which go to make the life and breath of perfumery and cosmetics" and "we must look to France for that irresistible spirit and inspiration."

Collapsible tubes

The cosmetic industry has been denied the collapsible tube for packing economical sizes of creams. The plastic substitute has not been too good because of sweating and the inability to find a satisfactory internal coating for the plastic tube. Lead tubes with tin coatings, used for pharmaceuticals and toothpaste will probably be continued for postwar.

Tin-coated lead tubes, even without internal coatings, were

used in Europe for a number of years before the war for food products. This country has been loathe to use such tubes even for toilet preparations, however, even though it has been proved by test that the absorption of lead into a product packed in a 7½% tin-coated tube is generally less than 100 parts to a million, and less dangerous, it is said, to the human system than eating an apple that has been sprayed with arsenate of lead. The Government standard for edible fruit is 100 parts of lead or less to the million.

Aluminum with internal coatings, it is said, will permit the use of aluminum for tubes for a great many cosmetics and toiletries products, once aluminum is available for these products.

Manufacturers' comments

The toiletries and cosmetics manufacturer is weary of substitutes, poor quality and workmanship. He wants quality packaging as soon as the all-out war status disappears with the defeat of Germany and Japan. Conversion to civilian production will be gradual, he feels, and the length of time to retool for all industries will be too great to bring out new revolutionary packages. Prewar packages and prewar materials will be back on the markets as soon as they are available.

The toilet goods industry is aware of the changing ways of living brought about by the war and those to come after the war and their packages will reflect such changes and progress to hold their place marketwise.

While it may be necessary to go forward with prewar packages for a while, it will be important to keep in mind that revolutionary influences of marketing will be activating research for testing for that purpose.

The postwar era should witness an even bigger boom in the cosmetic industry. Women will desire more color, varied colors, more appeal, more joy in the form and content of their cosmetics. They will continue to spend money on an ever-increasing variety of such dream stuff.

There will be an insistent demand for brilliant packages. Unique conceptions will be at greater premiums. Judging from the past, the toilet goods industry will not fail to take advantage of what may well be its greatest opportunity for more glamorous presentations.



Procedures

... simplified for dehydrated packs

by F. C. Edelston*

Method II packaging, recognized by all the branches of our Armed Forces as a most valuable means of protection and economy, takes on added significance in the light of postwar industrial conversion. It is apparent that this country will play the major part in building up the devastated and obsolete industrial facilities all over the world. After the war, therefore, export shipments of machinery of all types—machine tools, automatic machines, mechanical equipment and appliances, instruments, sub-assemblies and spare parts—will rise to tremendous volume.

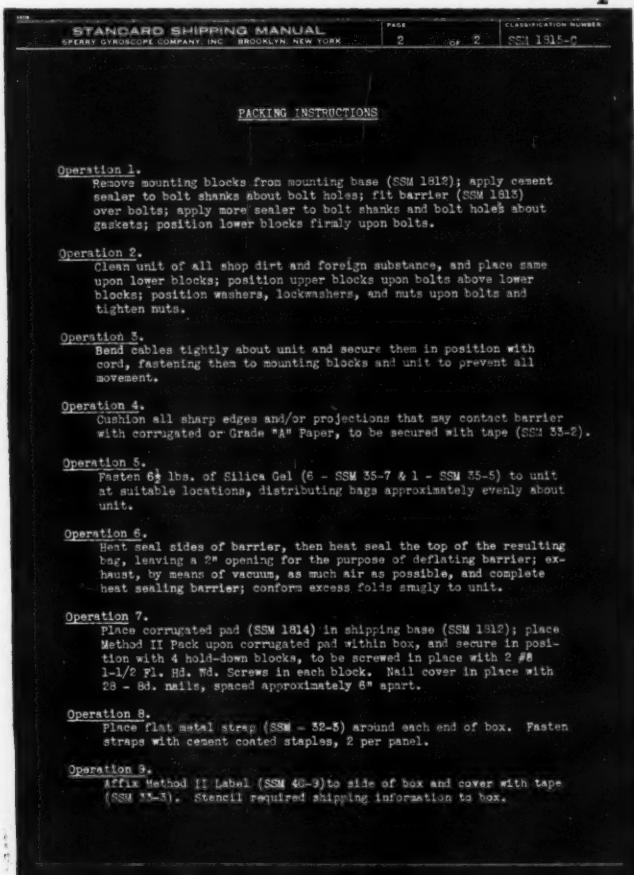
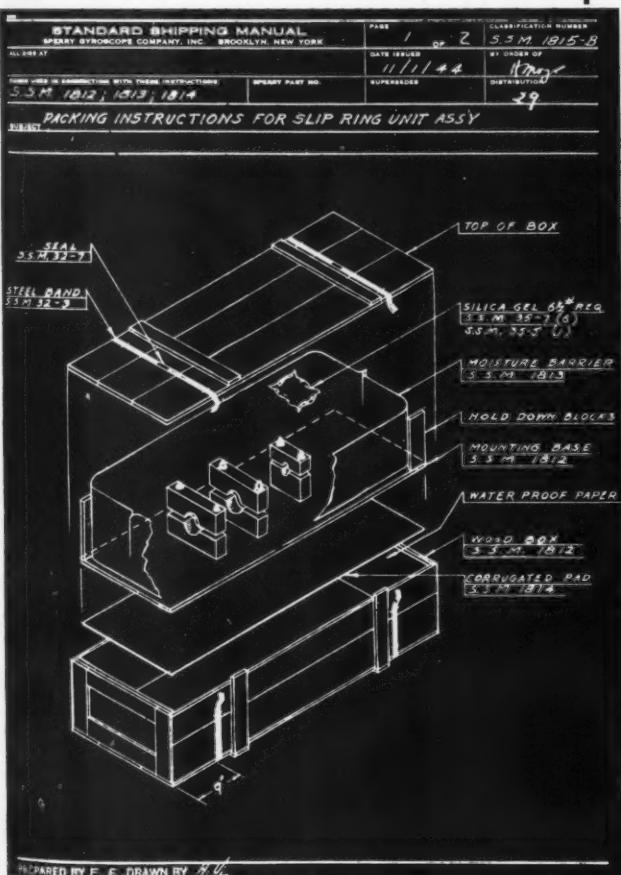
The large scope of export shipments will demand streamlined methods of packaging and packing. It is a foregone conclusion that industry will avail itself of the obvious economies and other inherent advantages of dehydrated packaging. As proper planning of efficient specifications will be an important factor in expediting the flow of well-designed, economical export shipments, it is well to review the lessons learned from developing practical procedures for writing individual Method II specifications.

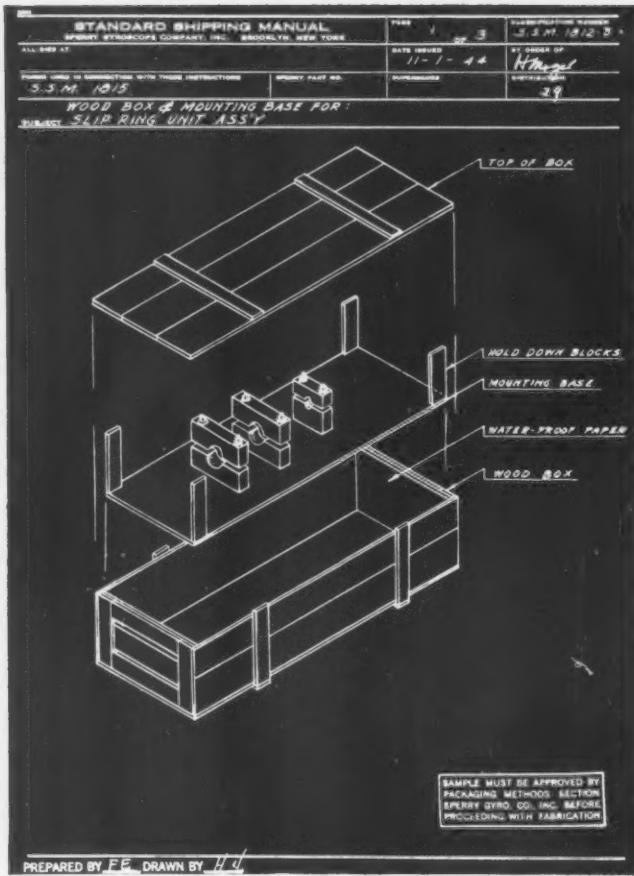
When dehydrated packaging first advanced from the re-

*Packaging methods leader, Sperry Gyroscope Co., Inc., Brooklyn, N. Y.

search to the production stage, contractors were faced with the necessity of establishing speedily individual specifications for export packs of a multitude of precision instruments and sub-assemblies. In the majority of cases, such specifications consisted of prints, showing all the details of the proposed pack on one large sheet. This type of specification proved quite unsatisfactory, one of the main objections being that it presupposes that all parties concerned are familiar with dehydrated packaging and, down to the man engaged in the actual packaging, can accurately interpret blueprints with which he must work.

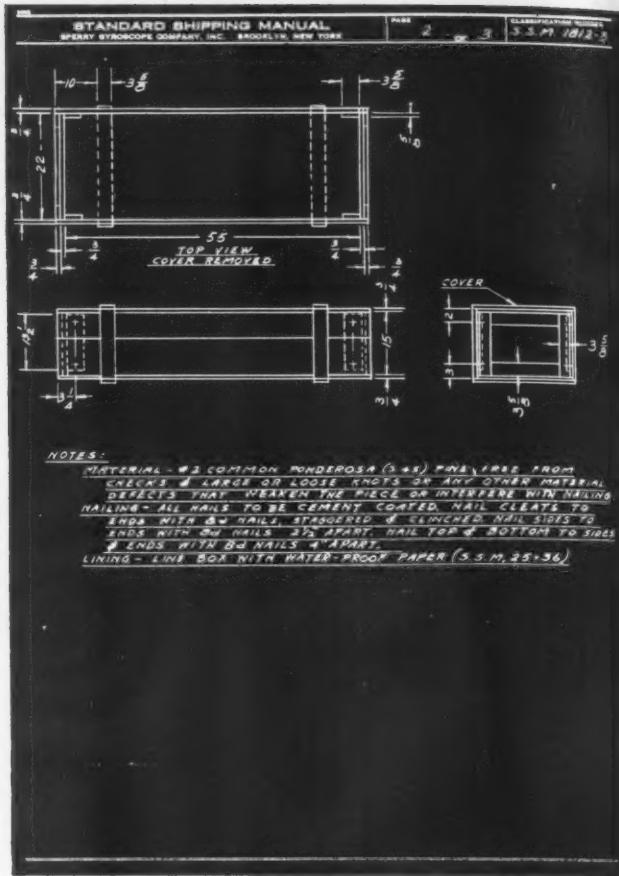
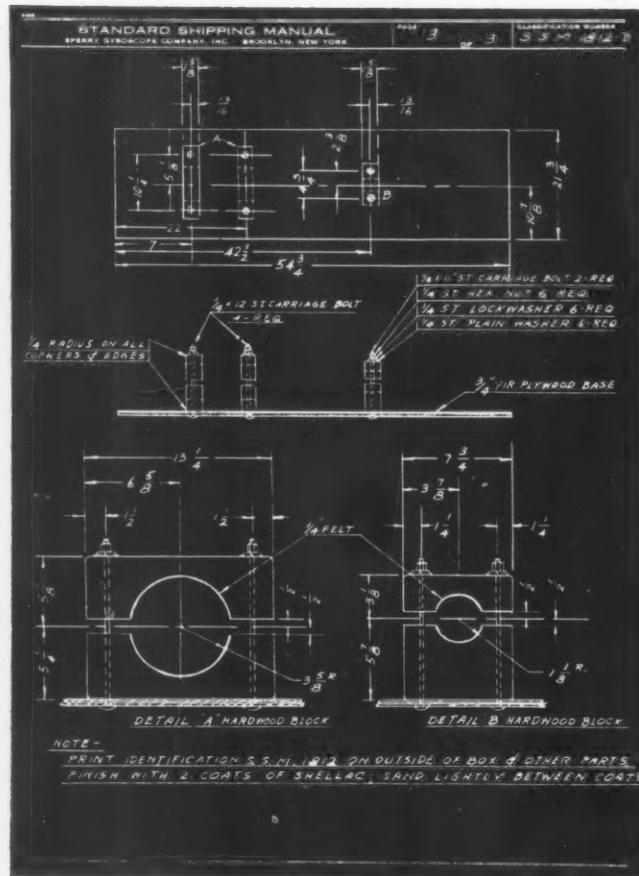
An improved form of specification supplements the large print with an operation sheet, listing the steps required to complete the respective pack. While this type of specification eliminates many possible misunderstandings and errors incurred before, it proved still far from being efficient. For one thing, it offers no assistance to the purchasing and production control departments which, in order to determine the commodities to be purchased or prepared, have to sort them out from a confusing number of details. This task, as well as all reference work pertaining to the proposed pack, is further





The blueprints (Figs. 1 to 7) reproduced on these pages comprise the complete set of simplified specifications for all departments concerned in packing a slip ring unit assembly.

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complicated by the unwieldy form of the large-size blueprint.

Therefore, it became desirable to create a standardized procedure for the composing of individual Method II specifications from which all interested departments—production, inspection, procurement and traffic—could readily obtain their respective information in clear and concise form.

The purpose of this article is to demonstrate procedures for writing individual Method II specifications that were developed by the packaging department of Sperry Gyroscope Co., Inc., under Robert G. Anderson, packaging supervisor.

The first step in planning writing procedures was an examination of the various functions of the average specification.

The primary purpose of each specification is, of course, that it be a set of instructions to the departments directly engaged in any phase of the packaging and packing, outlining operations as well as materials required to prepare and complete the pack. The main part of each specification, therefore, is a sequence of operations (Fig. 2), supplemented by an isometric exploded view (Fig. 1) of the pack which shows the coordination of its various components, arranged in the relative order of their assembly. In the interest of production control, it may be advisable under certain conditions to include in this specification a bill of material.

Another important function of the specification consists of information, required particularly by the purchasing department, regarding the commodities to be procured for completion of each pack. In considering this aspect it was found that it would facilitate the ordering and control of the various needed components of each pack, if separate specifications for each component commodity or for each group of related component commodities were available to the purchasing department for ready transmittal to respective vendors or bidders.

This factor led to the principle of creating for each Method II pack a group of component specifications, arranged accord-

ing to those basic characteristics of each component or group of like components that would determine the type of supplier.

Accordingly, for instance, all wood components of a Method II pack, such as boxes, bracing, mounting base and blocks, etc., would be included in one specification (Fig. 3) covering only this particular group of components. This arrangement enables the purchasing department to classify readily the respective sources of supply, at the same time aiding in simplification of procurement through consolidation of related commodities on one specification.

Another consideration in planning standardized writing procedures was the desirability of a form that would afford ready reference and readability to all interested departments. Ideal for filing purposes is a sheet $8\frac{1}{2}$ by 11 in., made of tracing paper to facilitate reproduction as blueprints. Space should be provided for the number of the specification, numbers of component specifications, page number, nomenclature and part number of the unit to be packed and of major assembly, if any, date of issue of specification and names of originator, department head and draftsman, if any. In some facilities it has been found practical to allow space for a stamp of approval by the representative of the procuring agency.

As an illustration of the scope and arrangement of component specifications for an individual Method II pack, a breakdown applicable to the so-called "Floating Bag" type of pack, the preferred form of Method II packs, is shown below. Essentially, the specifications correspond to the main components of the pack which usually are:

1. Moisture-vapor barrier
2. Mounting base, mounting blocks and/or cradle
3. Container(s), intermediate and/or shipping cases.
4. Cushioning
5. Desiccant.

Accordingly, this type of pack would be divided into the following component specifications:

STANDARD SHIPPING MANUAL
SPERRY GYROSCOPE COMPANY, INC. BROOKLYN, NEW YORK

PAGE 1 OF 1 CLASSIFICATION NUMBER SSM 1813-B

ALL SIZE AT DATE ISSUED BY ORDER OF

11-2-44 SPERRY GYROSCOPE COMPANY, INC.

FORM USED IN CONNECTION WITH THESE INSTRUCTIONS SPERRY PART NO. SUBJECT

SSM 1815 1815

MOISTURE VAPOR BARRIER FOR SLIP RING UNIT ASSEMBLY

DETAILS

1. CORK OR RUBBER BASE GASKETS
2 REQ. 1/2" X 2-5/8" X 1/4" HOLE

2. CORK OR RUBBER BASE GASKETS
4 REQ. 1/2" X 2-5/8" X 1/4" HOLE CENTERED

1/4" HOLES 4 REQ.

SPACE ALLOWED FOR HEAT SEALING

INTERIOR 33H47-7

DETAIL "B" 4 REQ.

NOTE: MARKING PRINT SSM 1815 ON OUTSIDE OF BARRIER
SEALING DO NOT SEAL OR TAPE SIDES

SAMPLE MUST BE APPROVED BY
PACKAGING METHODS SECTION
SPERRY GYRO CO. INC. BEFORE
PROCEEDING WITH FABRICATION

PREPARED BY E.E. DRAWN BY E.Q.

I. Moisture-vapor barrier

This specification (Fig. 6) consists of a plan of the flat processed sheet, showing dimensions and the type of material from which the barrier shall be made. It further indicates details of gaskets, boltholes and the sealing of the side seams, if required.

II. Wood components of pack (Figs. 3, 4 and 5)

A. If wooden cases are used, this specification should show:

1. 3 views of case and dimensions including hold-down blocks and dimensions
2. Details of special bracing, if any
3. Type of lumber and finish
4. Nailing schedule
5. Type of lining, if any

B. If wood mounting base is used, this specification (Fig. 5) should include 2 views and dimensions of same.

C. If mounting blocks and/or cradle are used, the specification should show 2 views, dimensions and details, including hardware required for mounting.

III. Fibreboard components of pack

A. If carton is used, this specification should show one or two views, depending upon complexity of construction and dimensions of carton as well as details of type of board, slotting and printing, if required.

B. If fibreboard cushioning of special construction is used, one or two views and details of same should be shown on this specification.

IV. Cushioning other than fibreboard

In the case of specially constructed cushioning, this specification should show two views and dimensions, set up in such manner as to enable the vendor or packaging department to proceed with fabrication. (If simple paper wraps or tape strips are used for (Continued on page 178)

STANDARD SHIPPING MANUAL
SPERRY GYROSCOPE COMPANY, INC. BROOKLYN, NEW YORK

PAGE 1 OF 1 CLASSIFICATION NUMBER SSM 1814-B

ALL SIZE AT DATE ISSUED BY ORDER OF

11-2-44 SPERRY GYROSCOPE COMPANY, INC.

FORM USED IN CONNECTION WITH THESE INSTRUCTIONS SPERRY PART NO. SUBJECT

SSM 1815 1815

CORRUGATED PAD FOR SLIP RING UNIT ASSEMBLY

NOTE

MATERIAL "A-B" FLUTE 2754
PRINT IDENTIFICATION SSM 1814 ON ONE SIDE OF PAD.

SAMPLE MUST BE APPROVED BY
PACKAGING METHODS SECTION
SPERRY GYRO CO. INC. BEFORE
PROCEEDING WITH FABRICATION

PREPARED BY E.E. DRAWN BY E.Q.



PHOTO, HAROLD M. LAMBERT STUDIOS



1—These injection molded polystyrene bottles (at left) are faithful replicas of glass (above, right) and offer many practical advantages. The multi-color decoration is silk-screened. Caps are made of wood.

Molded plastic bottles for Sportsman talc

All too frequently, the adoption of a molded plastic container results solely from considerations of eye appeal. In the case of John Hudson Moore's "Sportsman" talcum eye appeal was, as always, important, but the change to plastic was made primarily for reasons of convenience and economy.

The "Sportsman" line of men's toiletries has built an enviable business on quality in packaging as well as product. Both product and package are adroitly keyed to what might be called the carriage trade in the men's field. Package styling is rich but restrained, its central theme being a multi-color silk-screen reproduction, directly on the monotone container, of such sporting items as a game bird or a horse's head. From every aspect—texture, form, decoration, color—the containers are most carefully designed to create a masculine appeal.

For some time the talcum had been packed in stock mold square glass bottles. To achieve the effect desired by the Moore Co., the bottles had first to be spray-coated on the outside with an opaque blue-green enamel, on all sides except the bottom. This required an intermediate shipping step between the glass plant and the silk-screen printers. At the latter point the bottles had to be handled a number of times as the various colors were applied in separate operations.

It will be seen that in this multiplicity of handlings the chances of damage or actual breakage of the containers were

far greater than in the case of the ordinary glass bottle, which is simply filled and labeled and sent on its way.

However, Moore's principal mechanical difficulty with the glass bottle was in filling. The bottle had an opening of approximately $15/32$ of an inch and filling with a fluffy dry product such as talcum was a tedious and time-consuming operation. An additional operation was the insertion of a shaker cork which provided a single center opening for dispensing the talc.

A metal can would, of course, overcome most of these difficulties, but even if metal were available it would not be acceptable to Moore for the reason that it is so commonly used for talcums of all grades and types. The Moore Co. insists on the unusual in packaging materials, to lift its products out of the ordinary. It has always, for instance, used threaded wooden closures, rather than plastic, for all its men's products, feeling that plastic in this case is too common and that wood has a special masculine appeal.

Casting about for an acceptable substitute for the glass talcum bottle, the Moore executives first considered wood for the bottle itself. It was felt that such a bottle might lend itself to filling from the bottom, with the bottom to be glued in afterward. It was found, however, that such a highly special item would be difficult of supply and might be prohibitive in cost.

Plastic suggested itself, but at the time plastic containers in bottle form were practically unheard of in the toilet goods industry. Blown plastic bottles were a recent development, but the entire available supply was earmarked for military use.

The Moore Co. put the problem up to its plastic suppliers, who were given a sample of the glass bottle and asked to duplicate it—in a plastic molding that would be attractive, convenient and economical. It was considered essential to keep the same shape, design and color and the same wooden closure.

The illustrations show how well the molders succeeded. The new talc bottle, now on the market, is injection molded of polystyrene in multiple-cavity dies in a high-speed operation. The bottle is complete as it comes from the mold, except for the separate bottom piece and, of course, the wooden top closure. The finish is complete, threaded for the closure and itself closed except for the five small perforations which serve the sprinkler function. The recessed bottom piece is molded and shipped separately.

One obvious advantage of this construction is that the bottle may be filled from the bottom, through the full section. Filling operations at the John Hudson Moore plant have been speeded up tremendously. The threaded top closure is first applied to the empty bottle and the bottle is then simply up-ended and filled with the required amount of talcum in a single shot. The snug-fitting bottom piece is then coated on the edges with a solvent (ethylene dichloride) and slipped into place, resting on a shoulder on the molding.

This cemented bottom is not only completely siftproof but, according to the molder, it is liquid-tight, suggesting that the same type of bottle could be used for liquids for which the molded-in sprinkler top would be advantageous.

Although to the eye the plastic bottle is so faithful a reproduction of the glass as to be almost indistinguishable, it has, on close examination, some distinct advantages in sales appeal.

Not the least of these is the soft, smooth "feel" of the plastic when the container is handled—always an advantage of plastic and particularly important in this case since it

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2—One big advantage of the plastic bottle is that it may be filled rapidly through the bottom; the separate bottom piece is then cemented in with solvent. 3—Contrasting the bottom of the plastic bottle (right) with glass. Recessed construction gives a firm, level base. 4—The efficient sprinkler top is threaded and perforated in the single plastic molding operation; glass (left) requires a perforated cork, inserted after filling. 5—The talc bottles, which come in two sizes, 4 oz. and 2½ oz., are shown here ready for the filling operation.



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PHOTOS 6 AND 7 COURTESY CREATIVE PRINTMAKERS GROUP

6—Special enamel inks for plastic are hand-applied through silk screen with hard rubber squeegee. 7—Bottles go through process from 8 to 11 times, depending upon the number of colors. Decoration is more durable on plastic.

helps to suggest the qualities of the product it contains. Light weight and the impression of indestructibility that plastic conveys are also in sharp contrast, on the credit side, with the heavy and fragile glass bottle.

The delicate mold mark which runs across the top and down the sides of the plastic bottle gives a pleasing break-up to an otherwise plain surface.

The blue-green color of the plastic bottle is through-and-through; it won't scratch or chip off as will the enamel from the glass. Furthermore, the color surface is as smooth as a mirror, in contrast to the enamel which has a slightly dappled look.

Finally, the silk-screen decoration is practically permanent on the polystyrene, whereas on glass it is easily damaged. New inks specially developed for silk-screening on plastic have a tendency to etch in and take a much firmer grip than is possible on glass.

Additional practical advantages became apparent as soon as the bottles went into regular production.

In the case of glass, the bottles had to be shipped from the glass plant to the spray coater to the silk-screen printer and finally to the company, being loaded and unloaded and handled several times at each stopping point. The plastic bottles go directly from the molder to the silk-screen printer and thence to the Moore plant. Production is speeded up and opportunities for damage minimized.

At the Moore plant, not only is the filling operation greatly facilitated but one additional step—the insertion of the cork shaker-stopper—is eliminated.

Shipping costs are reduced all along the line. The plastic

bottle when filled with 4 oz. of talcum weighs only 6 oz., as compared with $11\frac{1}{2}$ oz. for the glass container. Shipping containers cost less and weigh less, since boxboard and partitions of considerably lighter weight are adequate for the plastic.

Polystyrene was selected as the proper plastic for this job because of its fine chemical resistance, good molding characteristics and low cost. Not all plastics would be compatible with the chemical formulation of the talcum powder. The polystyrene compound being used, however, was carefully selected on this point and was given laboratory tests which showed that it would impart no odor to the delicately scented talcum.

While polystyrene has less impact strength than acetate, it is quite adequate for the requirements of this job and it is used in relatively thin wall sections—again helping to keep down weight and cost. Its color stability is excellent and it is capable of taking almost any color in the spectrum. It would be possible to mold the same bottle in transparent polystyrene, but this was not considered desirable for talcum powder.

In view of the low base cost and lower specific gravity of polystyrene, the final cost of the molded bottle is lower than it would be with any other thermoplastic material, according to the molder. Cost is, in fact, comparable with what might be expected with thermosetting materials.

The molder states that the plastic bottles can be molded faster than glass and with less manpower and that they have greater uniformity in dimension.

The "Sportsman" talc is marketed, as it has been in the past, in two sizes—4 oz. and $2\frac{1}{2}$ oz. net. The two plastic bottles are identical except for size. There is a four-cavity injection mold for each size bottle and an eight-cavity injection mold for the base. The only finishing operation required of the molder, after the bottle has been taken from the mold, is a slight gate and flash removal.

In this case a flat, plain surface was desired. It is perfectly possible, however, to mold any embossed or debossed design right into the bottle and there are many other decorative possibilities.

The new plastic bottle is as popular with the silk-screen printer as it is with the Moore Co. and its customers. Physically, the plastic bottles are much easier and less hazardous to handle.

The hard oil enamels used extensively by silk-screen processors for labeling and decorating glass containers were found to lend themselves equally well to the decoration of polystyrene. Slow-drying enamels are chosen as a rule. A longer drying period permits the solvents in the enamel to act upon the surface of the polystyrene in a way that ensures a permanent bond.

While some experimental and short runs had demonstrated that a silk-screen application of enamel to polystyrene was eminently satisfactory as to durability, the "Sportsman" talc container provided the first opportunity to test it in large runs. No difficulty whatever was encountered.

The "Sportsman" line offers the customer a choice of three decorative designs—the mallard duck, the pheasant and the horse's head (Fig. 1). All three designs are applied to both the large and small sizes of talc containers and they are shipped in assortment.

Depending upon the design, all containers receive from eight to eleven imprints of color and the colors have to be in register to a very fine tolerance. The uniformity of the polystyrene bottles has been found (*Continued on page 168*)

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1—Complete window display stresses the new "in action" theme for Parke, Davis vitamins. 2—Small easel-mounted cut-outs act as counter displays for use with the package. 3—Shipping container for the window display can be inverted to make this extra interior display piece.



New point-of-sale campaign for vitamins

A complete point-of-sale merchandising campaign for Parke, Davis & Co. vitamins has been planned to draw customer attention right down the line from the mammoth three-piece window display on into the store and directly to the counter where the products are sold.

The new, "in action" theme recently adopted is the center of attention in all the pieces from the complete window treatment to the small, human interest "package" counter cards. All are sturdily constructed of heavy paperboard, full-color lithographed and individually easel-mounted.

The large, three-piece display (Fig. 1) is so constructed that each piece achieves a third-dimensional effect by means of portions extending outward from the main illustrations.

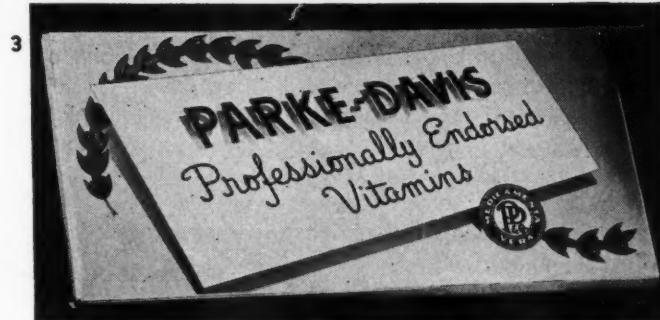
These three units were designed for a store with a large window display space available, but the usual chain drug store which has a divided or sectional window arrangement also has been taken into consideration. A long, narrow easel-mounted card has been designed for this type of space which repeats the baseball picture with the addition of two cutouts of the packages, complete with price, placed to gain length.

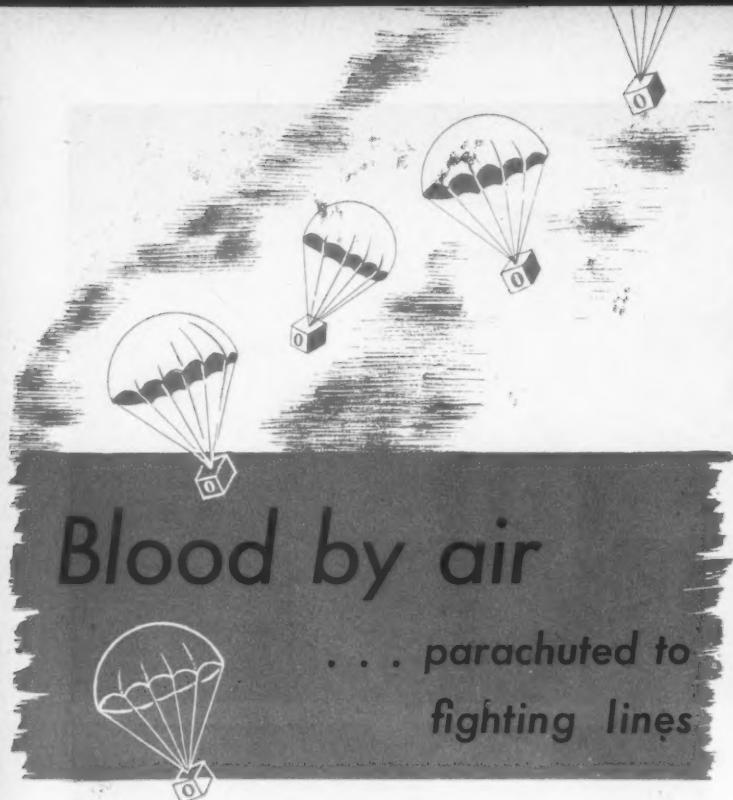
An interesting feature of the window displays is the shipping container which is lithographed on the inside and can be inverted to form an additional piece of display material (Fig. 3). Set up, it makes a dignified piece which may be used over the prescription counter or on a top ledge. By utilizing this additional paperboard, Parke, Davis is complying with the Government request that no paper be wasted.

The small counter cards (Fig. 2) not only identify the end use of each of the vitamin preparations but, in addition, help the consumer locate the product in the store when the cards are used as counter units near the stock.

To complete this group of sales boosters, Parke, Davis has added streamers and stickers for interior and exterior use.

CREDIT: Lithographer, Thos. A. Schutz Co., Chicago, Ill.





Blood by air

... parachuted to
fighting lines

Delivery of whole blood to wounded fighting men on Pacific battlefronts less than 48 hours after it has been taken from donors on our West Coast, 7,000 miles away, is one of the most spectacular packaging feats of the war.

Development of a unique refrigerated shipping container has made it possible to preserve whole blood for as long as three weeks, but because of the pressing need experiments recently were made in dropping the container by parachute directly to the fighting lines. It was found that the sturdiness of the wooden container and the exceptional cushioning provided for the glass jars of blood made parachute delivery entirely feasible and many deliveries are now being made in this way.

The over-all container, is in effect, a portable refrigerator—a $1\frac{1}{4}$ -in., 3-ply plywood box, the inside dimensions of which are 20 in. square by $21\frac{1}{2}$ in. deep. The box has a hinged top with two latches and on two opposite sides are grips to facilitate carrying. Stenciling on the top and sides identifies the contents, "Human Blood," and provides the cautions "Handle with Care" and "Keep Away from Heat."

The trunk-type lid of the box, which fits into tongued grooves, is lined 3 in. deep with glass wool. The four inside walls and the bottom of the box are also lined with 3 in. of glass wool.

Spun whole glass is not only one of the most efficient insulating materials but it has exceptional resilience. It provides a springy cushion for the blood package on all sides and will not mat down no matter how rough the ride.

With proper icing, the insulation will maintain the required temperature of 40 to 50 deg. for approximately 60 hours, after which the container must be re-iced.

Inside the all-around liner of Fiberglas comes a corrugated carton approximately 14 in. square.

The corrugated box contains a round, galvanized metal canister made up in two sections. The upper section is made to fit nesting into the lower. The upper section has perforations in the bottom to permit aeration between top and bottom sections. The top section of the canister also has a tight-fitting, slip-on lid.

Inside each of these two sections of the canister is placed a circular wire basket, each basket having capacity for eight



1—Whole blood packed in glass-wool-insulated, refrigerated shipping cases are protected for parachute delivery.

jars of blood, making a total of 16 pints of blood per shipping case.

The wire basket has a circular opening in dead center into which fits a galvanized iron cylinder, to be filled with crushed ice. This cylinder, made with a tight slip-on lid and solder-sealed bottom, extends from top to bottom of the double canister.

With the ice container in the center, each of the sixteen bottles of blood—riding in the apertures of the wire baskets—is held next to the cylindrical container of ice during its air journey to the battlefield.

While it was intended originally that the refrigerator box would be handled as regular air cargo, unloaded at an airport and rushed overland to the fighting lines, experiments showed that the same sturdy container would withstand a drop by parachute, without damage to the precious contents. It is,

4—Metal cans and 2-tier wire rack for jars are assembled in corrugated carton. Can holds crushed ice, good for 60 hrs.





1

2

2—Boxes of $1\frac{1}{4}$ -in. triple-plywood, 20 in. square by $21\frac{1}{2}$ in. deep, are made up on an assembly line. 3—Boxes are lined, sides, top and bottom, with a 3-in. thick blanket of glass wool for insulation and protection.

3

3

accordingly, dropped without any additional protective wrap.

As action in the Pacific increases in tempo, the need for whole blood is increased and the West Coast blood stations of the Red Cross are planning an expanded program, according to Lt. A. E. Allegrini of the Navy, who is in charge of the work.

The whole-blood service is in addition to the well-established supply of dried blood plasma. Battle experience has shown that in many cases of severe wounds, where casualties have suffered so much loss of blood that the oxygen in the system is reduced below a critical point, only whole blood is effective. Accordingly much of the "O" or universal type blood taken from Red Cross donors is now being shipped in the whole state.

Until very recently it has not been possible to keep whole blood safely more than a week. Dried plasma can be kept for years. However, the recently developed Loutit-Mollison

solution, when mixed with whole blood, makes it possible, if proper refrigeration is maintained, to retain 75% of the whole blood's efficiency for 21 days.

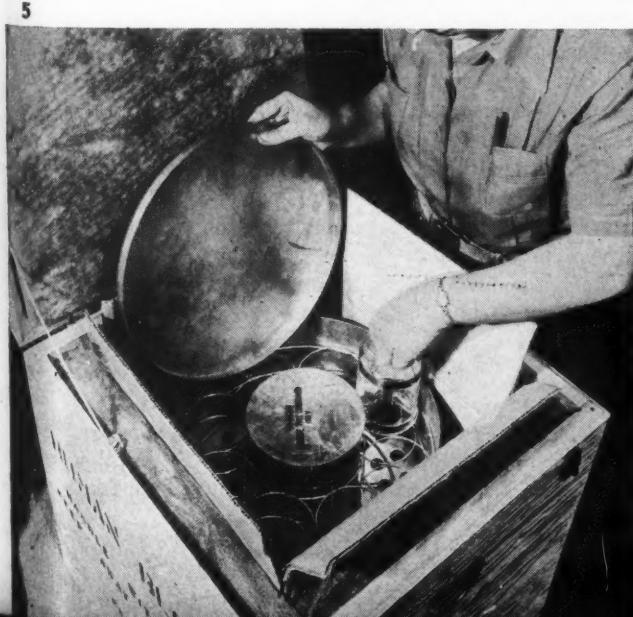
With the preservation hurdle overcome, then came the engineering problems connected with packaging and transportation.

Taking the Navy specifications as a starter, Lt. Allegrini and A. P. Mailliard of the Export Packaging Co., San Francisco, developed improvements and changes.

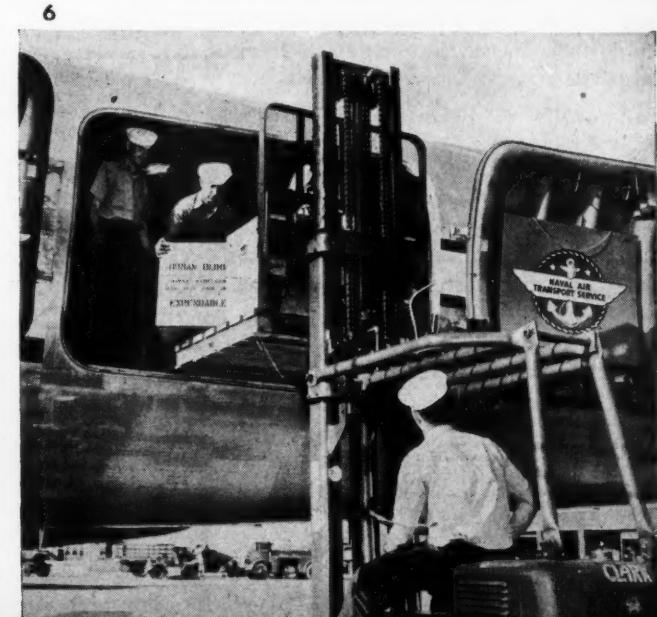
The jars into which the blood is to be placed are delivered to the Red Cross completely sealed. The seal is made with a special soft rubber stopper covered with an aluminum tear tab. Each bottle, which is a sterile vacuum jar, contains the required amount of the preservative. Accompanying each bottle is the transfusion equipment—the needle and rubber tubing, which is also completely (Continued on page 176)

5—As inner box is placed in shipping case, rack is checked to see that it will hold blood jars snugly.

6—Whole blood is loaded on Navy transport plane in San Francisco. In 48 hrs. it may be at the front line.



4



5

6

Prospects for fancy box papers



1—Photo illustrates some of the leading standard patterns, showing florals, wood grains, feather and geometric designs that have been continued for box use throughout the war.

At this time of the year, when manufacturers are beginning to think of gift packaging for the 1945 Christmas season, a review of the decorative paper situation is always a timely subject.

Due to the pulp situation, the subject cannot be approached today with quite the enthusiasm of normal times, yet the way the fancy paper industry has been able to supply most of its regular customers with attractive standard lines and expects to do the same in 1945, is an achievement that has received too little attention.

The achievement is all the more remarkable in an industry whose life blood is dependent upon a wide selection of designs and patterns.

In normal times, success or failure of a line of products or a complete line of papers depends upon how well the manufacturer of the boxed merchandise, the box maker and the fancy paper converter have been able to forecast popular taste in design and colors.

Today, however, practically anything will sell, because there is so little fancy paper to supply civilian demand. Surplus stocks of designs unpopular before the war have been cleaned out. Due to difficult supply and labor conditions, converters since the beginning of the war have had to concentrate on a few standard lines. There has been very little time for

change-over in production from one pattern to the other. There has been precious little metal for extravagant metallic printing. The user has had very limited selection.

Converters report that they are running only 50 to 60% of normal production of fancy papers for civilian uses. They have not been restricted by government order in the quantity they produce, but their output is limited by the tonnage of paper that can be supplied to them by the mills. Pulp is rationed to the mills and the amount the mills can divert to civilian usage must therefore be voluntarily rationed among the various converters. Usually the amount a converter receives today is determined more or less on a friendship basis with the mills where he normally does business.

The fact that some converters are engaged up to 85% in war work also affects the supply of fancy papers available for civilian orders.

While the machinery rolls on war orders, however, the converters are already thinking of postwar lines. Tucked away in desks are new designs waiting for the day when they may be put into production. In warehouses are embossing rolls held for the time when paper supplies are plentiful. These paper men lend an ear to any word of design trends. They are eager for suggestions from designers. As in other industry, they too are more alert than ever to methods for measur-

ing consumer preferences in design. Much of their past planning has been in the dark because of their remoteness from the end usage of their products. The converter sells to the box makers. Oftentimes they do not know what type of boxes he plans to use the paper for. Closer cooperation with box makers and users of the boxes will bring designs more quickly styled to changing tastes and fancy-paper makers are working to that end.

There is an excellent opportunity for the designer in this postwar program to develop completely original designs integral to paper and paper processing in contrast to past practice. Established embossing designs, for example, are most usually simulations of fabrics such as linen, herringbone tweeds, silk brocade, laces, basket weaves—or leathers, such as pin seal, alligator or ostrich. Oftentimes, printed designs are wood grain reproductions or florals patterned after cretonnes. Fancy paper converters constantly watch the textile industry for designs in fabrics that may be adapted to paper in line with fashion trends. Many of these are beautiful designs and will continue forever. One paper man can point to an embossed leather pattern that his company has been producing for more than 70 years. Off and on it returns to popular demand. Throughout swatch catalogs one might find hundreds of designs that are good year in, year out.

Nevertheless, there is constantly a desire for something new. The fancy paper industry points to the modernistic or geometric design influence that characterized the late twenties and early thirties. They are trying to forecast what the next will be. To date, nothing so pronounced has replaced this vogue.

One paper company revealed some design experiments based on forms portraying light refractions through glass and symbolizing the graph lines translated from electronic impulses of radar waves. These designs have a timely theme, but how they will be received by the buying public it does not know. The company is willing to take a gamble, when the patterns are worked out to its own satisfaction.

Some of the fancy paper companies are making excellent protective papers with greaseproof and moisture-vaporproof qualities for ordnance wraps and other overseas shipments. Many of these offer the user a completely new type of packaging paper. Some of these may be combined with decorative printed or embossed effects to provide eye appeal. So far,

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2—These are popular embossed, violet and floral stripe that are re-ordered again and again. Stripes are more difficult to handle due to necessity of accurate placement of stripes on the box.

however, the companies have been too busy with war orders to experiment.

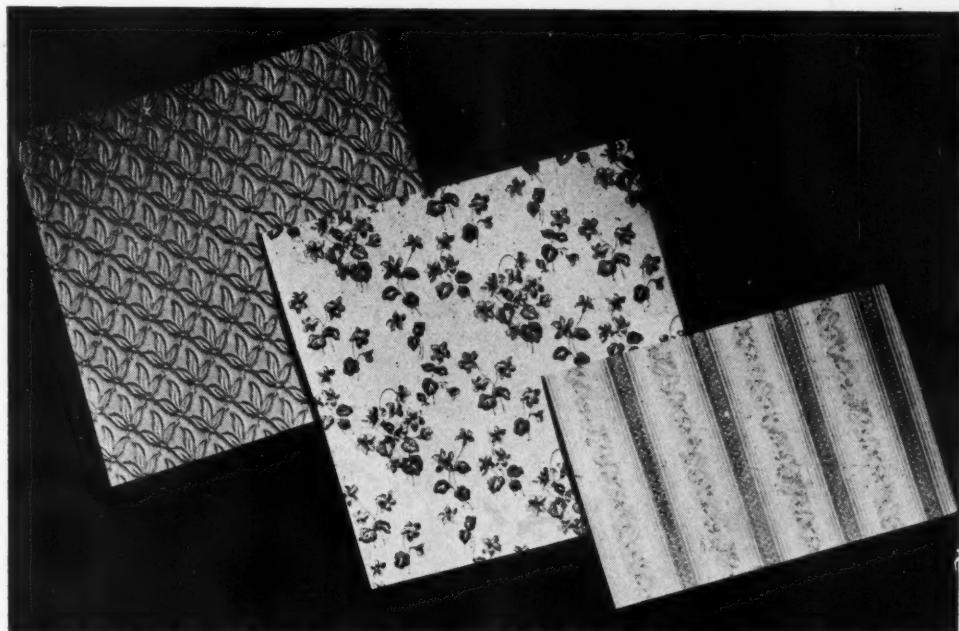
Leading consumers of fancy box papers are stationery, candy, cosmetic and jewelry manufacturers and distributors. Another big field is gift boxing of all kinds. Of all these, the manufacturers of fancy boxed stationery and papeteries are said to be outstanding in the determination of style trends. Tons of papers are used for this purpose every year as box coverings and box linings. The designs selected are watched avidly by the fancy paper and box-making industries because of their influence on boxes for other lines of merchandise.

Just before the war, competitive merchandising placed increased emphasis on the value of trademark and brand identity. Many companies had their own trademarked papers. Fancy paper manufacturers believe there will be more of these after the war. The prospective users, however, should know that trademarked papers are feasible only for the packer who can use upwards of 1,000 reams (approximately 26,000 lbs. of average-weight stock) before the cost of art work and engraving and other specialized production costs are covered.

Most fancy-paper makers have printing facilities and embossing rollers for producing several hundred different designs. In normal times they introduce 8 to 12 new printed patterns in various colors and 4 or 5 new embossing patterns a year. Old designs are kept, many revived again and again at five- to ten-year intervals; others are inactive unless a particular order for them is requested.

Once the pulp situation clears and the metal situation eases, all of these designs and many new ones will be ready for resumption of the decorative packaging that was such an aid to sales appeal. Almost any of the types of decorative fancy papers and methods of producing them are possible, but a user should select them with care—based on accurate measurements of consumer preferences, the type of his market, the quantity he uses, the cost factors, etc. The user must also watch the little details, such as deciding whether he wants to pay for the extra handling required for matching stripes on boxes, colors and surfaces that are easily soiled, etc.

CREDITS: Swatches illustrated in photos, courtesy, Hampton Glazed Paper and Card Co., Hazen Paper Co., The Marvellum Co., Nashua Gummed and Coated Paper Co.





Three-in-one

A trick compact with unusual features is this one injection-molded of cellulose acetate for Curly Lox Products of Detroit. The novelty is called "Trio-ette" because it has a compartment for loose or cake powder on one side, one for rouge on the other side and the handle opens to reveal a lipstick. It is made in simulated tortoise, ivory and carnelian.

The makers of the compacts are not necessarily interested in selling cosmetics since they are not cosmetic manufacturers. Their interest lies in selling the compact as a container and therefore it is equipped with dry rouge cake, powder compact and lipstick.

The floral decoration molded on the one cover was designed by a Czechoslovakian wood carver known for his work in public libraries and other buildings and the rest of the design was conceived within the organization.

Assembling the compact is a very complicated procedure requiring 27 operations. It has three mirrors. Metal pins are used in the hinges and little metal points are sunk into the plastic closure to insure a tight catch.

Each compact is packaged in its own folding carton and a separate carton of similar design for refills holds a small box of powder, a cake of rouge and two small transparent acetate vials containing lipstick refills. The heart-shaped tag attached was used for St. Valentine's Day promotion but a different tag is attached for year-round stock.

DESIGN



Dressed up oil filters

With the increasing trend to sell more and more automobile parts in service stations, Purolator Products Co. felt that a major change in the design of its packages for oil filters and replacement elements was in order. Prior to the war these units were packaged in well-identified corrugated cartons (top of photo). But, as cartoning materials became increasingly difficult to obtain packaging became a major problem.

About a year ago it became obvious that postwar plans had to take into consideration a package with good trade identity which could be recognized immediately on service station shelves. Other companies were beginning to manufacture competitive products and package them in cartons which put across the selling story. Purolator called in a designer to develop a package design which could be adapted to all packages; used on the products themselves for identification and used in advertising and promotion.

The results can be seen in the high-gloss finish, folding cartons designed to put across the sales story of the oil filter. The design, using dirty oil dripping through the large "O" of the name and coming out clean, is the basis of all the units. Brilliant red is used for the background with a black band to set off the yellow drops and the reverse-printed white lettering.

CREDIT: Design, James Harley Nash, New York City.

More lipstick tricks

Hollywood comes to the variety store counters in the form of a container for cream lipstick complete with applicator brush a la cinemaland. The Natone Co. of Los Angeles calls it new product "Brush'n Blend."

The holder for the stick and brush is injection molded in one piece; the material, cellulose acetate. Colored a fairly brilliant red, it contrasts nicely with the white cellulose used for the brush handle.

The base for the lipstick is of metal, provided with a push-up knob for elevating the stick. On returning the lipstick to its case the push-up knob hits a small notch in the plastic case and in this way is guided back into place avoiding any mashing of the top of the lipstick.

Because it is meant for display on the counters of variety stores, this new combination is carded on a brilliant yellow, blue and red card. A loop of red paperboard, stapled to the card, holds the unit securely and, at the same time, allows the customer to withdraw it for closer inspection. The same card is used for all shades. Shade name is designated on a small round paper label fastened to the bottom of the plastic case and does not appear on the card.

The reverse side of the card gives fairly complete directions for the use of this new method of applying lipstick.

CREDIT: *Molding, Modglin Co., Los Angeles, Calif.*



HISTORIES

Redesign of an old label

Hunt's Supreme Quality foods have been on sale on the West Coast for the past 50 years. At that time the label shown at the top of the photograph was quite far in advance of labels generally used. As the years went by, however, it became apparent that the design was becoming old fashioned and modernization was in order.

The labels shown in the center were the first redesign made in 1943. Full-color reproductions of the contents of the can were added and the name "Hunt's" was given greater prominence. In 1944 more improvements were made until now the labels are like those in the bottom row of the illustration.

These improvements are of such a nature that the familiar red label design remains the same. All type faces are larger and easier to read; the predominate red of the label has been deepened for greater color intensity; a chrome-green band has been placed near the bottom carrying the name of the product in lemon-yellow, for contrast; and a panel on the side carries sell copy. The Hunt slogan, "Hunt for the best," has been added to the signature cut on the back and all the color photographs are more realistic with attention to detail and the strengthening of highlights. All these changes add up to a package which quadrupled the sales of just one product—tomato sauce—within a year.

CREDIT: *Labels, Stecher-Traung Lithograph Corp., San Francisco.*





1—Six different packages for Bisquick promote product for many bakings other than biscuits. At a distance they may look alike, but examined closely there are six different, appetizing dishes featured.

Supermarket technique in food labels

Women know Bisquick primarily as a product to make biscuits quickly. Not so many know it is equally desirable for making dumplings, muffins, shortcakes, waffles, pancakes or meat-pie covers.

General Mills, who make this product, decided recently that the time had come to emphasize that Bisquick not only produces biscuits, but is also suitable for many other baked and cooked foods.

This marketing problem affected all phases of Bisquick advertising and the company felt it was an opportune time to make the package label helpful in this job.

The result is one of the best supermarket packages to appear this year.

General Mills policy is always to use informative labels on its packaged foods, showing ingredients, analyses and uses of the product.

To show all the bakings for which Bisquick was especially suited on one label would have been impossible—without getting each individual illustration down to practically postage stamp size.

How to do it then? This is how the company went about it. They first selected the ten most popular bakings and these were to be reproduced on the tight-wrap label. Still this was a great many and brought up the problem of what to do with the front display panel.

The solution was to put biscuits on every front panel, but beside them, one other dish—a different one on each of six variations. The result is different pictures on different packages in a case. At a distance, they all look alike, but close up you can see six different labels—featuring combinations as follows: dumplings and biscuits, muffins and biscuits, strawberry shortcake and biscuits, pancakes and biscuits, meat pie and biscuits. All the elements of the label, however, are

alike—product name in bold letters diagonally across the top with the pictures in full color below on a bright attention-getting yellow background. Side and back panels of each package carry directions for ten bakings and these backs and sides are uniform among all six packages.

Directions for the ten bakings on back and sides are identified not only by name but by number so ready reference may be made to them on the radio.

For presswork reasons it was decided that the practical number of variations of the front label should be the six most commonly baked items.

At the time the packages were developed a study was also made on dimensions of the package. The company desired to adjust the dimensions so that a good-sized front panel would be provided for grocery shelves and in displays. There were limiting factors in the requirements of the packaging machinery which prevented extremes, but still allowed a wide possible selection in three dimensions.

Cartons were prepared in various sizes, all with the same cubic content and these packages were subjected to "apparent size" tests to determine which set of dimensions gave the best visual impression to the consumer of substantial size and volume.

Other tests were made to be sure the two bakings on the label did not produce confusion and to discover whether consumers would understand that Bisquick should be used for any number of other bakings in addition to the standard biscuits.

Each of the labels was made to show biscuits in addition to one other baking in order that the variety-of-use idea would not completely obscure the product's primary use as a biscuit mix.

The company says although no one feature of merchandis-



ing, such as the package, can be evaluated in regard to its exact sales possibilities, "one thing we have noticed through the use of six different packages is that we are getting more display space on grocers' shelves."

General Mills has made noteworthy package changes for two of its other products during the past year in accordance with new supermarket package-display technique fast becoming popular.

After 18 months of careful research and testing in grocery stores, the new Softasilk package illustrated here (Fig. 2) was born.

The completed package was planned after more than 100 designs were tested among women which revealed the fol-

lowing preferences in packages for this type of product:

Designs featuring cakes won over those not featuring cakes.

The larger the cake the more housewives favored the design.

More women preferred pictures of devil's food layer cake with white icing than any other kind.

Most women liked simple design.

They selected the designs on which "cake flour" was printed clearly and easy to read.

Housewives wanted recipes on the package.

The new Softasilk package incorporates all these features. The words "cake flour" are easy to identify; the Softasilk trademark is presented in large block letters; the picture is a large devil's food cake; the name (*Continued on page 170*)



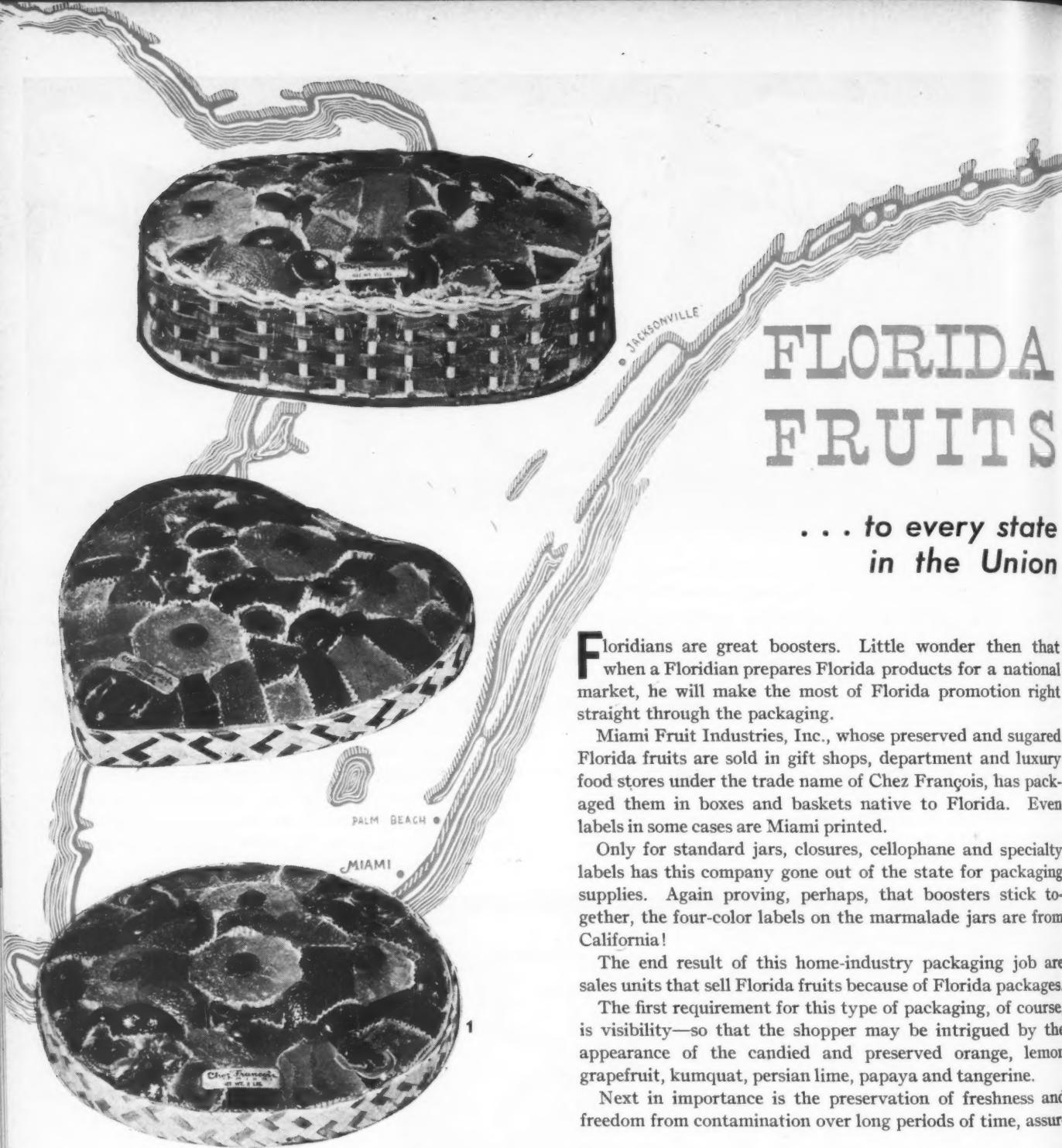
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2—New Softasilk package (right in photo) represents 18 months of research which proved that women liked best pictures of devil's food cake, wanted name "cake flour" big on package and wanted recipes and service aids on back and side panels.

3—Betty Crocker soup mix packages have been simplified to give more emphasis to name, "Betty Crocker." Backgrounds are attention-getting yellow with contrasting name bands.





FLORIDA FRUITS

... to every state
in the Union

Floridians are great boosters. Little wonder then that when a Floridian prepares Florida products for a national market, he will make the most of Florida promotion right straight through the packaging.

Miami Fruit Industries, Inc., whose preserved and sugared Florida fruits are sold in gift shops, department and luxury food stores under the trade name of Chez François, has packaged them in boxes and baskets native to Florida. Even labels in some cases are Miami printed.

Only for standard jars, closures, cellophane and specialty labels has this company gone out of the state for packaging supplies. Again proving, perhaps, that boosters stick together, the four-color labels on the marmalade jars are from California!

The end result of this home-industry packaging job are sales units that sell Florida fruits because of Florida packages.

The first requirement for this type of packaging, of course, is visibility—so that the shopper may be intrigued by the appearance of the candied and preserved orange, lemon, grapefruit, kumquat, persian lime, papaya and tangerine.

Next in importance is the preservation of freshness and freedom from contamination over long periods of time, assur-

1—Gift baskets are Florida made. Wicker shortage has been solved by substitute of pressed pulp and straw for the weaving. Scrap plywood is used for bases. 2—All fancy shaped jars have been discarded for standard glass. Distinctive labels call attention to something special.





—Vivid stylized design in orange, lemon, black gives prominence to trade name on fruit sticks box. A simple green palm tree pattern on natural stock background puts over the Florida idea on fruit cake and pecan roll box.

ance of safety in remailing, easy customer identification and packages that open easily.

Chez François had solved all these problems before the war. Wartime restrictions and scarcities made some changes necessary, but in spite of these the company has been able to maintain individuality of packaging and sales appeal without any sacrifice of durability and convenience.

The sugared fruits are packed in gift baskets made by a Miami industry and hold one, two, five and ten pounds. The prewar baskets, which are still used to some extent for the larger size packages, are made of woven veri-colored wicker with a wood base. The round pegs on which the wicker is woven are driven into the wood base, the basket is then lined with waxed paper and the fruits, each in an individual paper cup, are arranged in two-, three- or four-layer patterns, according to the weight to be packed.

A square piece of amber cellophane is stretched over the basket and the top moistened with a sponge. The four corners of the square are overlapped at the base of the basket, glued and sealed on a hot plate. Moistening stretches the cellophane which dries quickly and contracts so that the cover is close fitting to prevent the contents from becoming disarranged through handling. The overlapped cellophane is further secured by pasting on a large, round Chez François label and the contents are safe from contamination or damage of any kind unless the cover is actually punctured. When the basket is to be opened, the Chez François label on the bottom may be torn off easily and the cellophane opened where it is folded over. On the top of the basket a small gold Chez François label is pasted...attractive enough to command attention, but too small to obscure any of the contents.

Today both wicker and cane, which came largely from Japan and China, are scarce. Even wood for bottoms of baskets is difficult to get, only scrap plywood is procurable.

Chez François, working with the suppliers of the baskets, has developed a substitute for wicker and cane, made of pressed pulp paper which in appearance is exactly the same as the original material. The paper substitute is in many ways superior to wicker and cane—more pliable, less brittle. There is also said to be less wastage from broken and uneven lengths. This imitation wicker and cane with scrap plywood for bases is now used entirely in the larger baskets and it probably may be continued after the war when cane and wicker will again be imported.

For the smaller baskets exactly the same method is followed except that woven straw is used for the sides and fibreboard for the bottoms. The woven straw is tacked onto a fibreboard rim and while these baskets are not quite so substantial as the wicker and cane substitute, they are sufficiently strong for the lighter contents. Both substitutes have the added advantage that the appearance of the baskets has been in no way changed...an important feature in a product designed for open counter display and dependent to a great extent on eye appeal for sales.

These baskets have re-use value as trays, sewing baskets and candy containers. The use of waxed paper and paper cups for interior packing leaves the baskets clean when the original contents have been removed.

Other Chez François products...sugared fruit sticks...pecan rolls and tropical fruit cake...are all sealed in cellophane, labeled and packed in boxes so that the outer cover can be removed for display or for customer inspection of the contents. A vivid orange and lemon background gives prominence to the trade name on the fruit stick boxes and a simple green palm-tree pattern on a buff ground is used for the fruit cake.

A large part of Chez François sales are for gifts which means that dealers must remail. For this reason most of the products are sent to dealers in fibreboard mailing boxes. Before the war these were covered with bright orange paper. The paper covers are no longer available and the remailing boxes are simply printed with the trade name and green palm tree design directly on the box.

Another convenience for dealers is the stamp containing product name on the sides of the mailing boxes. Merchandise not on counter display can be kept in the original mailing box and variety is quickly identified by these stamps.

Chez François has found that individuality in packaging marmalades and jellies depends almost entirely on labeling. Rows of preserved fruits in glass on a luxury food store counter present a colorful array to the customer. For this reason the label must be arresting, not large enough to obscure contents, but large enough for trade name to be read easily.

Before the war Chez François used a number of fancy-shaped glass jars and bottles for their marmalades, jams and jellies in the belief that the fancy shape drew attention to something special and unusual.

Today all the fancy shapes (*Continued on page 168*)

PACKAGING PAGEANT

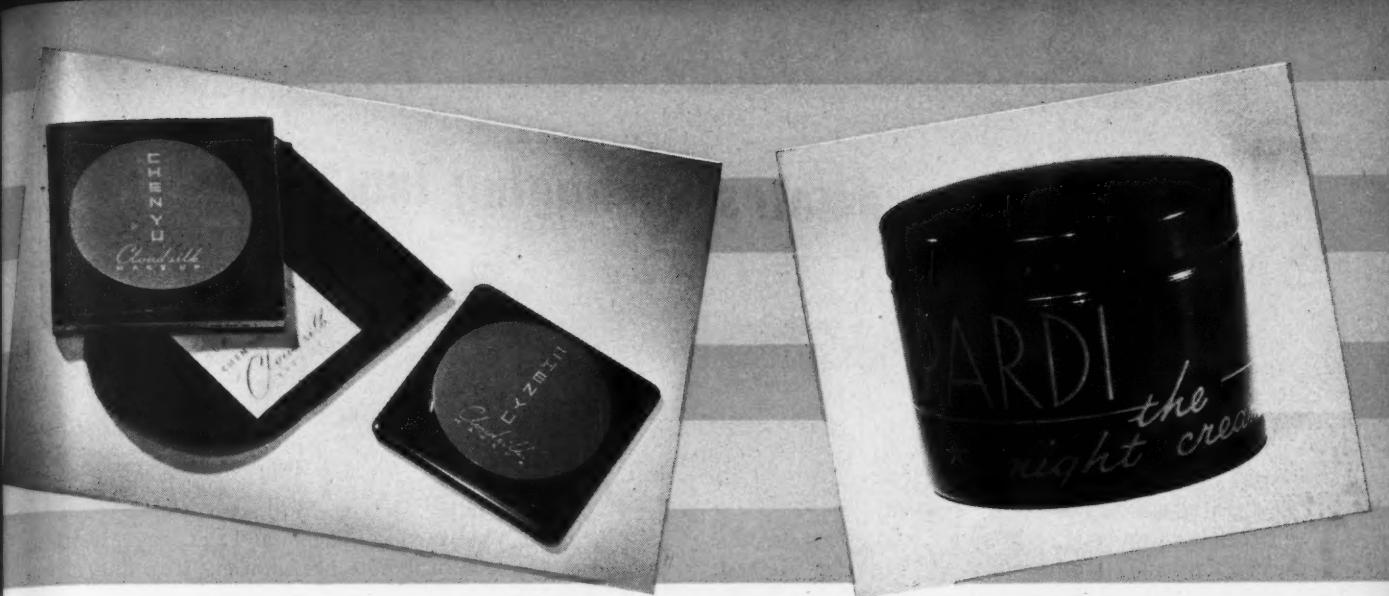


1 Bath bubbles in a gray ceramic jug is the latest packaging news from Jean Naté. A wooden-topped cork closure is painted black to match the stark, dull-finish black label. To further the monotone effect, the lettering on the label is white and gives an appearance of being hand done. Another smaller black label, also printed in white, appears on the reverse side of the jug giving directions. Jug, Robinson Clay Products Co., New York. Closure, Gibson-Jones Co., Inc., New York. Labels, the Palographia Co., New York.

2 A fresh color treatment of rich maroon against a background of gold with lettering in white is used on the new label for Schenley's Golden Wedding. Slightly varied in shape from the former label, the design bears the same immediately recognizable script lettering long associated with the brand. Selection of the label followed months of planning, testing and experimenting. Label, American Colortype Co., Chicago.

3 Pond's green with white dream flowers make a pleasing color combination for this slim, lightweight make-up case. Urea formaldehyde is the material used for molding and no liner is used. The make-up is packaged in two sizes, both recommended for purse use since the largest weighs only 2.2 ounces. To be released for sale by May 1, the new make-up pat is being promoted by means of nation-wide advertising and counter display-stands are being made available to retailers.





ChenYu's new cellulose acetate container for "Cloud Silk" make-up definitely belongs in the luxury class. The chunky rectangular bottom is black, the cover brilliant red and the depressed lettering filled in with gold. A metal liner keeps the contents from direct contact with the plastic. A small hole in the center of the bottom section makes it easy to push the empty metal liner out and insert a refill. Since the container is meant to be re-filled time and time again the compact is provided with a flannel bag to prevent scratches and is retailed in a striking black and red folding carton.

In the search for a different and distinctive container for its night cream the Pardi Laboratories finally decided upon a color scheme of brown and green. The problem of coloring the opal jar brown was answered by a specially made enamel and the green lettering is done by a fired-on process. Under the cap, stretching across the cream as a seal, is a decalcomania-type label which repeats the lettering on the jar; another label of the same type is applied to the bottom and gives directions for use. Caps and jars, Hazel-Atlas Glass Co., Wheeling, W. Va. Enamel, B. F. Drakenfeld, New York. Decoration of jar, T. C. Wheaton Co., New York. Labels, The Palographia Co., New York.

Walt Disney's famous Donald Duck has now become a salesman for Nash-Underwood, Inc., of Chicago, packers of peanut butter, mustard and other foods. His familiar figure struts across both the cap and the label. The package has been designed to show him off to best advantage and get maximum

mass-display effect. Strong blue and yellow predominate in the label, with red and white as accents. Lithographed caps, The Aridor Co., Chicago.

The new "Charm-Kurl" home permanent wave kit is said to be the first cold wave of this type on the market. A 4 by 6½ in. folding carton, which can do duty as a counter display, contains all the makings of a salon-type cold wave. Three neat packages—a sleeve, containing the curlers, a bottle of solution and a box with the neutralizer, end tissues and cotton applicator—plus directions for use are all decorated in pale blue and black to match the outer carton. The blonde, beautifully waved girl's head framed in gold is the center of attraction both on the closed container and when it is opened as a display. Designer, Frank Foster, Chicago. Boxes, American Coating Mills, Elkhart, Ind.

A combination sustenance package and emergency flask for the Armed Forces is now molded of ethyl cellulose, chosen for its toughness and resistance to wide temperature ranges. The kit is filled with emergency rations and medications such as benzedrine, antiseptic ointment, aspirin and water-purification tablets. After removing the contents the soldier tapes the telescoped top in place making a waterproof seam and the flask is then used to hold water. The kit also contains a smaller flask which becomes a watertight match holder. Directions for use are molded right into the plastic sides of the container where they remain always legible and cannot be washed away or otherwise removed. Molding compound, Celanese Plastics Corp., New York. Molder, Master Plastic Molding Corp., St. Louis, Mo.



Clinic... promotes packaging improvement

by Walter Stern*

The December 1944 issue of MODERN PACKAGING described the functions and organization of the Packaging Methods Department established as a centralized packaging authority at Spiegel, Inc., one of this country's larger mail order companies which also sells extensively to the retail specialty store field.

We outlined in this article, as one of our main instruments in the promotion of packaging, our "Packaging Clinic," which presents exhibits of Spiegel's and competitors' merchandise under the focus of special topics of interest. Communications from readers have evidenced a desire to get a closer view of the manner in which a packaging clinic operates—how it is set up, what it deals with, what its audience is and what reactions result. We have, therefore, attempted to describe a typical clinic, and to illustrate some of its main features.

The basic thought which resulted in this development has frequently proved successful in many other fields. It is demonstrated by many of the present Government exhibits on a multitude of details concerned with the conduct of the war; particularly by the exhibits of export packaging according to government specifications.¹ It is the idea of demonstrating a topic by actual examples rather than by talking about it, writing about it or attempting descriptions. It is a

method which has been used again and again by advertising agencies preparing elaborate presentations with illustrations and specific examples; by package designers preparing actual dummies instead of showing a perspective drawing of a proposed package; by the actual crate samples used in place of written descriptions at U. S. Forest Products Laboratories in teaching principles of proper crating. It enables the sale of an idea to the men who "want to be shown."

Actual demonstration best

Starting with the premise that concrete results in a packaging improvement campaign can be achieved best by actual demonstration, Spiegel, Inc., designed and constructed a special exhibition room for this purpose. It consists, principally, of enough wall space to illustrate ideas and of enough well-placed and well-lighted shelf space to display samples of packaging. Only utter simplicity in design and color scheme will produce a room which will be neutral in character and which will bring out forcefully the presented exhibit. The same simplicity will make it adaptable to any special topic, to any special display plan or layout. Indirect fluorescent lighting has proved most advantageous in providing uniformly diffused light, practically without shadows. The initial expense for such an exhibition room will be more than outweighed by the forcefulness with which certain necessities

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¹ See "Tropic Proofing," MODERN PACKAGING, Jan., 1945, p. 84.

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for packaging and packing improvements can be demonstrated and proved.

In our packaging clinic for March 1945 we attempted to illustrate and demonstrate "What Causes Freight and Parcel Post Damage," a topic of outstanding importance to any merchandising organization which relies almost completely on the mails and the common carriers to bring its merchandise to the home of the ultimate consumer. This exhibit was made possible through the close and active cooperation and support of the Freight Claim Division of the Assn. of American Railroads and particularly by the continuous assistance of its executive vice-chairman, C. H. Dietrich, and its special representative, A. L. Green.

Panel high-lights special points

Entering the Packaging Clinic, the visitor is confronted with an exchangeable poster panel (Fig. 1) headlining the current exhibit and highlighting its special points. The present clinic illustrates the causes for freight and express damage in dramatically enlarged photo panels furnished by the A.A.R. (showing not average transit conditions, but illustrating particularly serious cases of wartime freight handling at its worst, as encountered by railroad investigators). Causes for parcel post damage are demonstrated with actual samples of packages as they were encountered at the Chicago Main Post Office, indicating typical packing failures.

The exhibit starts with a pictorial description (Fig. 2) of the general conditions under which wartime freight travels, and of the hazards against which it should be protected. It shows pictures of crowded freight yards to prove the immense size of the operations involved; it shows railroads in sub-zero weather and tropical heat to illustrate temperature conditions; it shows shunting, humping, loading, unloading, hand-trucking, trucking and other handling details through which most shipments must go before they reach their ultimate destination.

Then the illustrations (Fig. 3) take the spectator into the inside of a freight car in transit. They show the terrific

stacking weights experienced in transit, the damages resulting from impact and shock. They pick out individual examples, show merchandise before it went on the trip and after it arrived.

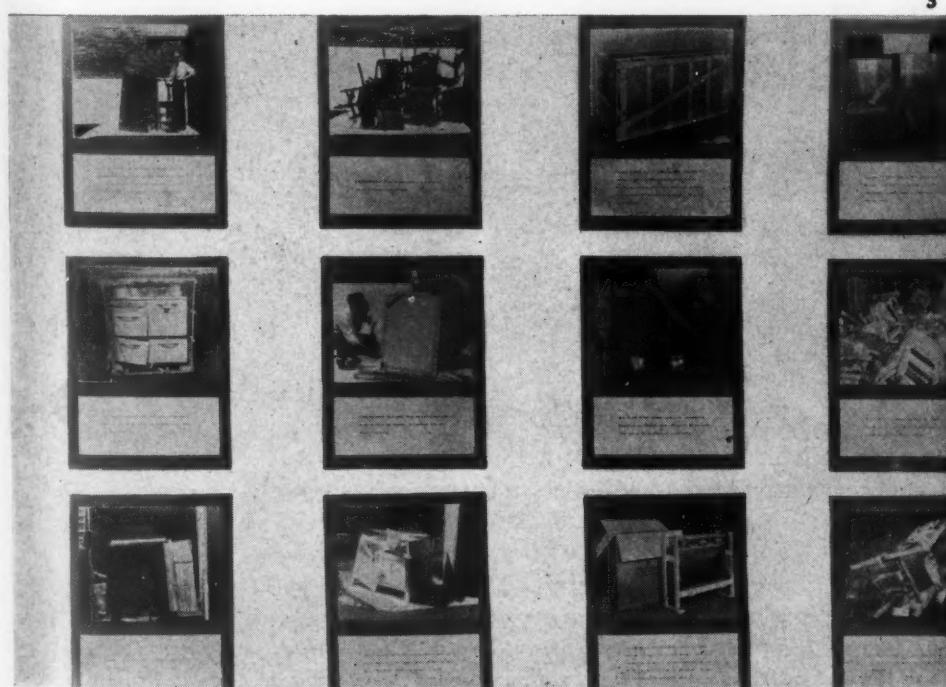
They alternate several illustrations of deplorably inadequate packaging with that of adequate and superior packaging; they show pictures of furniture distorted, crushed and wrecked beyond recognition, and they show why this was bound to happen. They show good crating and bad crating, good cartoning and bad cartoning, perfect inner packing and the results of lack of inner packing. They demonstrate in striking close-ups the importance of proper sealing, taping or stapling as closure; the importance of proper marking and addressing; the importance of proper carload bracing and the inevitable results of the lack of proper bracing.

They also illustrate the principles of suspension; of clearance crates versus pressure type crates; of properly engineered corrugated inner packing; of steel strapping and its adaptations; of padded wraps, corner protection, finish protection, dust protection and protection against stacking weight, stresses, shocks and the general hazards met in an average freight car.

Samples show parcel post damage

On shelves and pedestals below these photos (Fig. 10) are displays of samples demonstrating inadequate packaging causing parcel post damage. They show thermos bottles with glass lining cracked and splintered because a chipboard folding box (intended for retail store "over-the-counter" handling) was used as shipping container. They show bench grinders cracked because the wheels were placed too close to the carton wall and therefore broke at the first outside impact. They show what happens to table services that are packed in an ample-sized carton of ample wall strength, but with straw cushioning unevenly distributed so that, while one side of the item is protected with an excessive amount of padding, the other side is almost immediately adjacent to the carton wall. They show what happens to toys that are shipped out

3



1—Poster panel at entrance presents theme of the current Spiegel packaging clinic.
2—First pictorial panel gives an understanding of exterior hazards of freight handling.
3—Next, a series of photos showing what packages must undergo on the interior of a freight car. Close-ups of some of these photos, and captions that accompany them are given in Figs. 4, 5, 6, 7, 8 and 9, which follow.



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PHOTOS 4 TO 9, COURTESY ASSN. OF AMERICAN RAILROADS

4—"A freight car loaded with inadequately closed cartons of heatproof ovenware. Four staples alone do not provide a safe closure—silicate glue and additional stapling would be desirable." 5—"This vanity won't have a mirror when it reaches the customer." 6—"Start of a properly stowed car. When this end is filled, a stout wooden bulkhead is strapped against the face of the load to prevent shift and reduce shock." 7—"A sheet of paper around the leg of a chair will hardly prevent breakage when many pounds of pressure are applied." 8—"Yards and yards of gummed kraft tape do not reinforce inadequate containers." 9—"Bracing by separation of the load through bulkheads does a great deal toward preventing damage in transit."

in a corner-stayed chipboard display container never intended for shipping purposes. In all cases the causes for the damage are explained and improvements suggested which will eliminate the demonstrated damage.

The exhibit is shown to small groups which are conducted on a very thorough tour, taking about 15 minutes for discussion, explanation and the supply of further information. The groups are mainly composed of persons who will be immediately responsible for the suggested improvements and the persons who will most benefit by a demonstration of transportation conditions in general. The clinic is shown to management to impress leading executives with the outstanding importance of proper packaging and the disastrous results of the lack of it; it is shown to merchandise buyers to enable them to discuss, intelligently and well-equipped, packaging questions with merchandise sources; it is shown to all operating departments who handle packaging and whose functions are related to packaging.

Through the exhibit the Controller's Division will obtain a closer view of why money is spent on packaging materials; the Training Department will learn more about why certain packaging methods are recommended for training; the Personnel Division will become acquainted with certain basic qualities required in employees performing packaging operations.

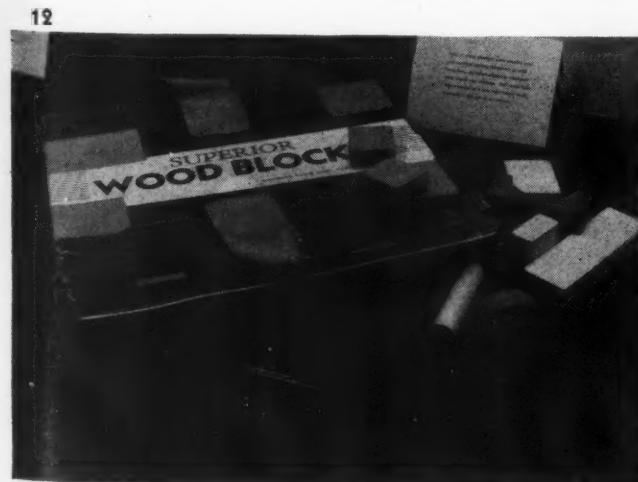
As a whole, the organization, from management to line employee, is gradually made increasingly packaging conscious and is furnished with the necessary knowledge of certain basic principles of adequate packaging.

All interested groups visit clinic

In an organization of this size it usually takes about 6 to 8 weeks before every interested group has been able to arrange for a visit to the exhibit. Clinics in smaller organizations can be planned and scheduled for approximately one-month intervals; clinics in larger organizations according to the time element involved.

This schedule will of course depend a great deal on the time which can be devoted to the exhibit's preparation, and

10—On shelf below pictorial panels are actual samples of parcel post damage caused by inadequate packing, with explanatory cards. **11**—China broke because straw cushioning was inadequately distributed. Bench grinders cracked because wheels were too close to carton wall. **12**—Chipboard display-container never intended for shipping.



on the ready availability of the material needed for its completion. Some exhibits may take 6 months of preparation time to set up others may be completed within a few days or a week.

Packaging clinic topics

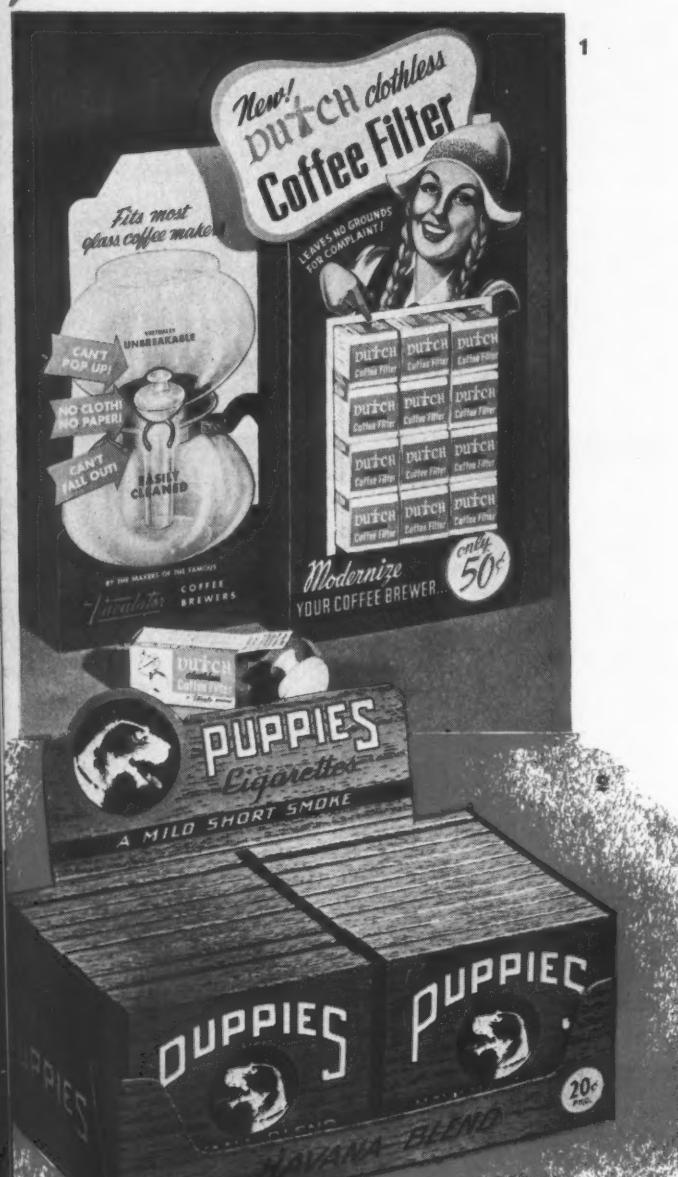
Possible topics for packaging clinics are: Demonstrations of methods resulting in packaging material conservation (how to wrap, how to tape, how to tie with the lowest possible packaging-material expense); demonstrations of proposed comprehensive design programs which will establish a family relation in the appearance of every package used by an organization; or damage prevention exhibits, as described above.

Even some relatively limited themes, as for instance an investigation of the best way to ship individually packed dresses, can be elucidated by a clinic demonstrating competitor's packaging, sampling models of proposed improved box or bag designs for final acceptance by the company and by showing results of test shipments made in the various packages.

The packaging clinic, no matter what size or equipment is chosen, will always do a convincing job as a promotional tool, achieving better packaging, not by talking or writing about it, but by proving to the men who "want to be shown."



Display Gallery



1

Up from under the counter comes a new kind of coffee filter for glass coffee makers. It is of unbreakable glass and is advertised to fit any size coffee maker. The Hill-Shaw Co., makers of the established line of Vaculator glass coffee makers, have introduced this new product and provided with it a colorful display unit that not only tells a complete sales story but is an actual dispensing unit for the merchandise. The compact display is 16 by 14 in. and holds 12 individual cartons of "Dutch" clothless filters. The filters are purchased in lots of three dozen, packed in individual cartons with the merchandising-dispensing display all included right in the corrugated shipping container to save paperboard.

2 This counter merchandiser for "Puppies," one of the many little-known cigarettes on the market today, is cut out of one piece of paperboard, ingeniously scored and folded to hold 20 small set-up boxes of cigarettes. Wood graining to match the paper covering of the boxes is reproduced on the paperboard in two shades of brown. The display is meant for counter use to encourage self-help in these days of manpower shortages. The display closes up into a carton and is then enclosed for shipment in a neutral gray chipboard outer container. Display, F. N. Burt Co., Inc., Buffalo, N. Y.

3 Leech cements, made by the Leech Products Co., are packaged in two different types of containers. The metallic cement (left) is in a collapsible tube while the fluid cement (right) is in a metal-capped bottle. Cut-out platforms in these counter merchandisers hold both the tubes and bottles erect. Each display holds 6 units. The displays are simple paperboard cut-outs which can be folded flat for shipment. The one for the tubes has an extra top-piece extension punched out to let the neck of the tube slip through. The manufacturers felt that the sales of these products could be increased substantially if the retailer could be coerced to display them in the open where the customer could see them and be reminded to buy. A simple, inexpensive device like the one shown was felt to be the answer. So far, sales records have proved the theory correct. Display, National Paper Box Co., Kansas City, Mo.

4 Thousands of druggists aren't going to be too startled when customers walk in and say, "There's a girl in bed in your window!" They'll simply be talking about the latest display put out by the Norwich Pharmacal Co. for Pepto-Bismol. The idea behind this colorful centerpiece is an obvious one—even a lovely damsel like the one shown can be unpleasantly affected by the gustatorial sins of the day. Ergo, it's a good idea to get that Pepto-Bismol now, and play safe. This young lady will be registering pain in drug store windows throughout the country all during the spring season working hard to sell both the large

(Page 126)

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and small sizes of this preparation for "upset stomachs." Small easel-mounted cut-outs of both sizes of the bottles are provided along with the centerpiece to round out the display effect when building a full-size window treatment. Display, Kindred, MacLean & Co., Inc., Long Island City, N. Y.

5 That both old and young can dance, care-free and pain-free, when they use the new Bauer and Black Blue Jay corn plasters is the sales story told by this almost life-size window display. The huge circular inset of a foot (lower center) features the addition of a pain-killing drug—nupercaine—to this nationally advertised corn remedy. Retailers are advised to use the centerpiece alone with packages of the product for a small window space but the company also provides two side cards for the really super-size window treatment. These side cards, easel-mounted cut-outs of a pair of feet, feature the principle items in the Blue Jay foot products line complete with price. All three pieces can be used inside as floor or counter pieces after they have outlived their usefulness as window displays because the high-gloss finish protects the displays from dust and dirt. Display, Zippordt, Inc., Chicago, Ill.



6 Another item that seldom if ever comes out of hiding from some obscure shelf in the average paint and hardware store is the paint-brush restorer. This display is designed to make it a counter product and to increase impulse sales. In these days of material shortages products of this type are rolling up impressive sales records when properly promoted. This simple yellow and black display does just that kind of promotion. It is dramatic; it shows photographically how the product works and it provides a space for the display of the product itself to put over its own sales message. Easy to set up, the display consists of a card cut and scored to allow the weight of the jar to hold it upright without the use of any easel device. Display design, E. Leonard Koppel, New York City.



7 Parfait Sales uses light wood in a simple, modern design for these dispensing displays for "Starlet" cake make-up and lipstick. The make-up display shows all six colors and carries a small amount of stock of both sizes. The backpiece, a paper-board cut-out, lists the types of complexions according to colors and gives both the day and night make-up shade for that type. The lipstick display also carries a stock of both sizes and, in addition, features an acetate flap with actual lipstick applications for color selection. The backpiece of this display stresses the "two-stage" lipstick—and points out that Starlet clings when fresh and for hours after application. The purpose of these two merchandise aids is to encourage customer self-help and, according to the company, reports from stores using them prove they are successful in saving both customer and sales-help time. Display, Van Dyke-Baird, Milwaukee, Wis.



Fish story that began in parchment



PHOTOS 2 AND 3, COURTESY GENERAL SEAFOOD CORP. AND AVI PUBLISHING CO.

1—On Boston Fish Pier, fish fresh from nets is hurried to "lumpers" carts, conveyed to processing wholesalers. Our Oceans contain inexhaustible supplies of nutritious food in fish form, but without proper packaging distribution would be very limited. 2—Filletting red perch at General Seafood Corp. Fillets are popular packaged fresh fish.

Before this country became an agricultural-producing nation, it drew heavily upon the sea for sustenance. In those early days the pioneers were content to take the fish from the sea, look upon the outer "wrapper" or skin of the fish as a natural "container" and proceed to cure this "package" in the best known methods then in use.

The principal old methods of preserving fish consisted of smoking, drying, freezing, pickling and salting. Some Eskimos still keep seal and walrus meat for weeks by merely burying it in cold beach sand. And Capelin, a smelt-like fish, dipped in brine and sun-dried on the bare rocks of Labrador, provides a winter diet there today. Carefully dried and patiently smoked salmon and whitefish still form the backbone of the native winter diet in much of Northwestern North America.

Fish is the most perishable of all perishable foods, but wholesale fish preservation was not started until the first commercial harvest of natural ice which occurred at a pond in Lynn, Mass., in 1805.

Next, the method of combining ice and salt was used for effective preservation and, later, fish was preserved by immersing it in cold salt brines. Mechanical refrigeration for preserving fish got its start during a calamitous winter mild

spell in 1890 that caused failure of natural cold storage supplies and threatened the spoilage of the country's entire food industry.

Subsequent progress in refrigeration helped greatly in the distribution of fish, but not shipment of appreciable quantities of fresh unwrapped fish away from the coasts.

Fish freshness, it might be explained, differs from both fresh meats and poultry in that enzyme action is wholly undesirable and bacterial deterioration extremely rapid and harmful. Fresh fish also contains a tremendous proportion of inedible waste, another condition that slowed long distance distribution. Gray sole, for instance, contains only 25% edible meat. A barrel of gray sole holding 200 lbs. of fish and 100 lbs. of crushed ice shipped from Gloucester to Chicago yields only 50 lbs. of fillet of sole.

The 150 lbs. of head, fins, skin, bones and viscera are worthless in Chicago. The same 200 lbs. of sole filleted, packaged and quick-frozen at Gloucester result in 50 lbs. of fillets packed for shipment in a fibreboard container occupying only one cubic foot. Prepared in this manner, the fish can be stored for months and shipped thousands of miles without deterioration.

Overcoming this waste problem, however, was not accomplished until after World War I. January 5, 1922, will go down in fish history as the beginning of the fillet industry in the United States. It happened in Boston when dealer Dana F. Ward first advertised in a weekly price list that he was "offering parchment-wrapped, boneless fillets of haddock" to his retail distributors. The dealer was trying out a suggestion of a parchment paper supplier who had sent him sample parchment suggesting it for wrapping frozen whole fish.

Those packaged fillets were shipped without ice, stowed in 20-lb. wooden boxes. The news that came back was bad. The fish spoiled in warm weather transit. The fault was due to both paper and fish having hard, dry surfaces and no refrigeration.

Soon, parchment-wrapped fresh but *wet* fillets were put in round tin containers holding 30 lbs. These, in turn, were placed in wooden boxes and garnished with large quantities of crushed ice. Instant success was the result of this innovation. For three years, those round tins were used to ship millions of pounds of fish. Then the round containers were dropped in favor of a rectangular tin container which was easier to handle and took up less space.

Parchment paper was soon being purchased in carload lots, printed in attractive designs. The first brand name for the fresh fish fillets was Whitman, Ward & Lee's Harvard Brand. Forty Fathom Brand was adopted by the old Bay State Fishing Co. a short time later.

From 1922 to 1927, the parchment-wrapped fresh fillet trade consisted almost entirely of haddock fillets, shipped in individual drop shipments of 20- or 30-lb. units by Railway Express to various small dealers. Thousands of new outlets were obtained throughout New England and the Middle West where heretofore it had only been possible to ship limited quantities of whole iced fish.

Even this improvement over the old method of shipping fish

had its limitations. Spoilage of fillets occurred if careful re-icing was not done in transit.

In 1917, a fur trader named Clarence Birdseye gave up fur trading in Labrador to enter the fish business in New York.

Dissatisfied with the inefficient methods in the distribution of whole fresh fish, Mr. Birdseye concentrated upon the production and distribution of packaged dressed fish, thoroughly chilled but not frozen and shipped in heavily insulated corrugated fibreboard containers. Soon it was found, however, that the chilled product was still far too perishable.

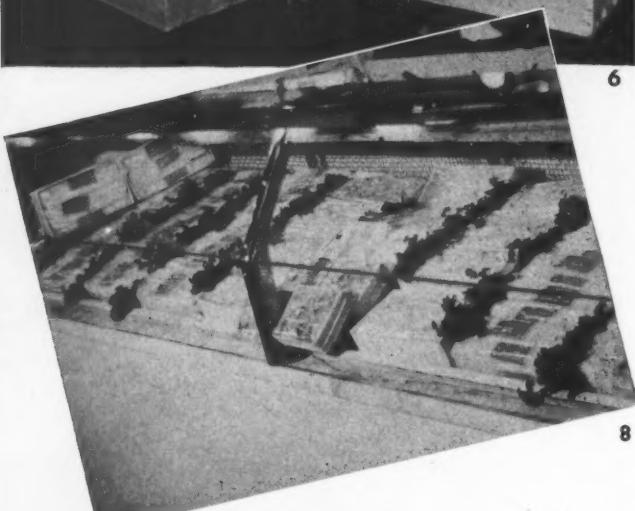
Mr. Birdseye remembered that caribou meat, ptarmigan, spruce partridges, ducks, geese, rabbits and even certain



3—Wrapping and cartoning fillets for freezing. Moisture-proof cellophane is used. 4—Tin-coated steel containers of 30-lb. capacity are used for non-frozen fresh fish. Workers take fillets from conveyor belt and wrap them carefully in printed parchment. 5—Filled metal boxes are conveyed by belt to weigher who also clamps on the lid.



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PHOTOS 6, 8, 10, 11, AND 12 COURTESY CANADIAN INDUSTRIES, LTD.

vegetables in Labrador frozen very quickly in extremely cold weather had been preserved for long periods.

He developed a simple apparatus for freezing packages of dressed fish and put it to commercial use in 1924. This was the beginning of the quick-frozen fish industry in Gloucester.

Several important principles are involved in the Birdseye quick-freezing method, which have withstood the test of time. The fish fillets are wrapped in parchment paper or cellophane and tightly packed in paper cartons to exclude all air space. The product is frozen after packaging; the freezing is done in cabinets having movable plates which contain the refrigerant.

After the packages are placed on the plates, they are forced upward by hydraulic pressure so that the packages contact the plates top and bottom. This action greatly reduces time of freezing.

The transition from salt cod to Birdseye quick-frozen cod in 1927 spelled new markets and additional sales in every state in the Union. In 1940 this meant, out of a national fish production of 126,000,000 lbs., that more than 100,000,000 lbs. were being quick-frozen in the Massachusetts fishing area.

Distribution facilities were augmented by refrigerated trucks in 1935. These trucks, which could pick up and deliver where refrigerated railway cars left off, carried perishable produce from western areas to eastern cities, taking back with them as return loads, the quick-frozen packaged fish fillets.

Since the development of such quick-frozen processes as Birdseye, Cedergreen and Flav-r-Pac, Honor Brand, Pict Sweet and others, the locker plant and the quick-freezing



PHOTO COURTESY GORTON-PEW FISHERIES CO., LTD.

6—*Fresh fish in metal boxes is packed for shipment in crushed ice in nailed wooden boxes, as shown.* 7—*Boston window display shows the many packaged forms which processed fish now takes. Both fibreboard and metal cans are used. Dehydrated cod is a new item.* 8—*Wrapped and packaged fish lends itself to attractive case display. Although this is a service case, the same sort of arrangement can be—and has been—used for self service.*

cabinet for city and farm home use have also added new markets for the sale of frozen fish because of the storage facilities thus provided.

Locker owners feel that greater simplification could be obtained if cartons were made to include an assortment of varieties in 1- and 3-lb. packages, separately wrapped, although these operators realize the limitations due to processing and packaging in this manner. There is a definite trend within the industry toward smaller packages of dressed fish, already pre-cooked to a certain degree and ready to heat and serve.

Such quick-frozen packages could be purchased by retailers in units and would contain perhaps a half pound of one type fish, a pound of another type and another half pound of a third variety. These units could conceivably be juggled so that retailers could purchase and display the same type of fish in 1-, 2-, or 3-lb. units if this was preferred.

There have been some headaches in past experimentation on this. One firm tried placing whole frozen haddock and cod fillets on cars, then wrapping them in parchment. Such a pack was too loose. They also tried pressing the fillets into shape in packages so that the final product could be stored without coming apart or loosening in transit. This has proved to be a logical answer and several varieties of fish are now so processed.

One of the disadvantages of the consumer-type variety package of fish is the labor cost involved. Fish filleting is normally a hand operation. Getting fish hands to tailor fillets or "steaks" to certain patterns would mean greater processing expense, putting the ultimate dressed package out of the running so far as competition with frozen meats is concerned.

A closely guarded secret in the fish processing business is the possible development of a filleting machine to ease the problem of cutting to size and to "price." There is no confirmation of such a machine actually being in existence but

fish men have long visualized the day when such automatic cutting machiney will come to their aid.

Intensive research and development have been undertaken by the fish industry to produce new food products based on fish. Such items are being talked of as cooked fish put up in cans with tomato and cream sauces. Packaged fish products that the housewife can fry or make into hors d'oeuvre are also visualized. Canned fish cakes have already been marketed. Many of these dishes may be added to the list of packaged frozen foods.

Oysters and clams are being frozen both in small and large packages. The cup type of waxed container seems to hold up well for the smaller packs. Waxed cartons lined with moistureproof cellophane are used, too. When cartons are closed, they are heat-sealed in waxed-glassine paper for further protection.

Some of the new synthetic sheeting materials may enter the fish packaging picture after the war.

Frozen fish products are often apt to dehydrate in cold storage. They get pulpy with loss of water. A tight wrapper, it is believed, might overcome this. One wholesaler already is said to be experimenting or actually using a plastic sheeting and with promising results.

Such a form-fitting synthetic wrapper is the subject of a discussion in "The Freezing Preservation of Foods" by Tressler and Evers (Avi Publishing Company, 1945), who state that transparent rubber-derivative films were rapidly coming into use as the ideal material for frozen fish before the war cut off supplies.

"The wrapping of individual fish fillets was one of the earliest developments in the packaging of frozen foods," they state. "Some packers wrap in printed, coated parchment paper whereas others use cellophane with an insert label. Fish fillets and ground meat, steaks and chops are the principal products packaged as an individual unit. One or more of these wrapped units are packed in a folding carton either before or after freezing, depending on the method used."

9—Refrigerated window display, showing widespread use of printed cellophane wrappers for fresh fish fillets. 10—There is no lack of eye appeal in the attractive printed cellophane wrapper and blue-and-white carton used here for 5-lb. package of quick-frozen haddock fillets. 11—Cooking suggestions on colorful wrapper (right) suggest ready-for-the-pan convenience of packaged fish.

They have described also the rubber latex bag for frozen fish.

"The latex rubber bag," they write, "is opened and stretched over a tube. A vacuum within the tube causes the bag to take the shape of the tube and the product to be wrapped is inserted in the bag. The bag, with the product inside, is then removed from the tube and a vacuum from a hose or tube exhausts the air from the bag and causes it to hug tightly the contours of the product. The neck of the bag is then twisted and heat-sealed."

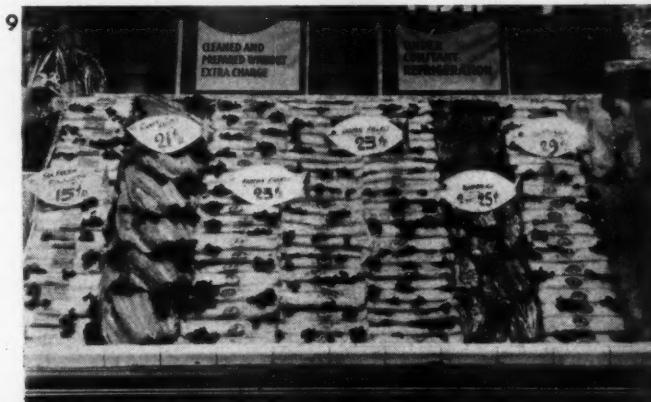
This type of bag has also been used in the packing and freezing of scallops, although frozen scallops are also packed in 14-oz. rectangular moistureproof, cellophane-lined cold-waxed cartons.

Considerable quantities of scallops, it is reported, are also packed for freezing in 1-gal. tin cans and in 1-, 2- and 4-qt. fibreboard containers. Neither of these, however, is entirely satisfactory. The tin containers rust and all except the heavily paraffined fibreboard containers absorb moisture from the scallops.

All of these difficulties indicate possibilities for postwar uses of plastic films.

Clarence Birdseye admits ordinary waxed paper or parchment wrapping inside wooden boxes, barrels or other containers is not enough for quick-frozen dressed foods which require more adequate protection against oxidation and loss of moisture during prolonged storage.

Whole frozen fish, it is claimed, have received protection from an ice glaze which evaporated only very slowly during storage and could be easily renewed as often as necessary. Glazing, however, is not suitable and ordinary packaging ma-



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PHOTO 19. COURTESY GORTON-PEW FISHERIES CO., LTD.

12—Well-designed cellophane wrapper used in Canada has six recipe suggestions printed on two end panels. 13—Smoke-cured fish require no refrigeration, can make use of attractive combination shipping and display carton. 14—Booth Fisheries pack cod loins for quick-freezing in one-lb. units in tray wrapped and sealed with printed cellophane. Recipes are printed on the bottom of the trays. Six trays fit into the carton as shown.

terials do not furnish the protection necessary to maintain the high quality which is essential.

Moistureproof cellophane was developed to meet this requirement and has served very well indeed. But since this new material first became available, many entirely new and very promising wrapping materials have made their appearance. Some are transparent, others opaque. Included are various forms of paper, coated or laminated with natural or synthetic waxes and resins; transparent sheetings having a latex base and thin-walled latex bags. It is to be anticipated that the immediate postwar period will make many additional new and valuable moisture-vaporproof packaging materials available.

Dehydrated foods, including fish, also require moisture-vaporproof wrapping materials and will benefit greatly from the work which has been done in connection with quick-freezing. Many authorities believe that the future of dehydrated foods depend to a considerable degree upon the developments of suitable packages for them.

Leaders in the food field see far-reaching changes in the perishable food industry. Quick-freezing, dehydration and other means of preserving even the most perishable fresh foods will eliminate time and distance. To a greater and greater extent, traffic in perishable foods will become international big business, they say.

United States patent protection has recently been sought for a process for simultaneously transporting and quick-freezing packaged perishables while being flown through the extremely low temperatures of the sub-stratosphere.

There is a definite possibility of using air transportation in connection with marketing of fresh fish. Because fish are so perishable, it is said, they must be delivered to consumer markets within as short a period of time as possible. Should the cost of air express diminish considerably, air transportation may be economically practical and may be used extensively at least for the more perishable products such as crab meat. In the low, subfreezing temperatures existing at high altitudes, refrigeration will be no problem. Frozen fish thus can be transported very readily, and in the case of fresh fish, it may well be more a problem of keeping them warm enough that they do not freeze rather than to provide refrigeration. Elimination of the need for icing fish in transit will reduce shipping weight considerably since not only the weight of the ice would be saved, but also much lighter shipping containers need be used. Heavy wooden barrels and boxes could be replaced with lightweight fibreboard containers.

One nation-wide food chain is seriously considering flying quick-frozen fresh fish fillets from the Atlantic Coast direct to its tributary outlets throughout the United States particularly in the Middle West.

There has already been some detailed experimentation done on the flying of live lobsters to distant points in the United States. At one time, the largest distributor of live lobsters, Consolidated Lobster Co. of Gloucester, Mass., operated its own planes. Regular commercial lines would not fly Consolidated's lobsters because the containers leaked ice water in transit.

Consolidated is therefore greatly interested in attempts of at least one major airline to develop a container that will permit large-scale postwar shipment of live lobsters. One proposed solution is a corrugated waterproof box and interior packing of moist seaweed with no ice.

Consolidated's reaction to this is that lobsters shipped, for instance, from Boston to Denver or the West Coast could not be transported successfully by air without either ice in the package or a refrigerated (Continued on page 172)

Carton salvage solves the shortage

Use of a war-inspired shipping-carton salvage shop capable of turning out more than 25,000 reconditioned cartons a week has enabled Roma Wine Co., Fresno, California, to overcome one of its most serious wartime packaging problems.

Already the largest producing winery in the world, the Roma organization has operated under a double shipping problem for the past two years—due to public demand for winery-bottled wines. Whereas prior to Pearl Harbor a vast percentage of the wine output went to Eastern bottlers in bulk shipments, it is now necessary that the winery do most of its own bottling. Part of this situation is due to a consumer insistence on top brand labels on the wines he is buying today and the rest to government restrictions on the use of tank cars, lower gallonage output, higher grape price, etc. At any rate, the world's largest wine production is now going out almost 100% through Roma's gigantic bottling plant.

This building, undergoing almost constant remodeling and improvement since 1942, is now one of the largest operations in the plant. Operating on a 24-hour basis with more than 150 bottling-line employees, the bottling plant contains nine semi-automatic lines, in place of the four which were more

than adequate in 1942, and currently is turning out a consistent production upwards of 100,000 cases of wine per week, or more than sixty million bottles of wine per year.

Under constant pressure from wine wholesalers and distributors trying to meet an all-time demand for all types of wine, the packaging plant has blossomed out as swiftly as bottling machinery could be obtained and put to work. A lot of credit for engineering ingenuity is due the bottling-plant supervisors who have re-built wornout, antiquated machinery into producing lines and thus made possible production of a million bottles per week in a space designed for 300,000 or less.

Loss of the tank cars which formerly carried away 5,000-gallon consignments of California wines forced Roma into building up its packaging facilities early in the war. At the outset, tripling contracts for shipping cartons solved the problem, these going out to distributors with the customary plea for good care and return of each carton or shipping case. Signs went up throughout the organization begging employees to conserve paper and to give every shipping case the best care possible. The better-grade cartons went to the prime markets and, for the time being, sufficed to meet the urgent need.

Half of all shipments from Roma Wine Co. now go out in cartons reconditioned in this salvage shop. Twenty women and 15 men devote their full time to sorting, reconditioning and remodeling much-used containers.



for a few months. However, with the wine production increasing swiftly and the bottling plant evincing "growing pains" under winery-label demand, normal sources of supply began to fail. When the government added still another factor by restricting quotas on both glass packaging and cardboard shipping cases, it became apparent that something had to be done. The inevitable call for upwards of 90,000 cartons per week demonstrated conclusively that the most likely breakdown in the Roma-to-consumer chain was the cartoning of the bottles produced.

Accordingly, quotas were arranged to handle new cartons most expeditiously for glass manufacturer and winery as the No. 1 step in keeping up production. From there on Roma took up the pressing problem of its own distribution to wholesalers in forty states. Not much study was required to show that the only likely means of alleviating future shortages lay in the reconditioning and repair of used cases. Consequently, a stringent "recall" clause was placed on all distributing agencies for every carton shipped, a thorough educational advertising program begun and steps taken to make sure that every Roma-shipped carton would come back to the plant for re-use as long as it could be held together.

The result is Roma's present carton-salvage shop, an operation employing 20 women and 15 men devoted entirely to sorting, reconditioning and remodeling of much-used shipping cases. Here in the main warehouse of the sprawling Roma property the plant has been able to develop sufficient facilities to keep slightly in advance of the 100,000-per-week demand from the packaging lines. During periods when shipping grows lighter or an allotment of new cases eases the strain the shop can build up a forward stock which to date has kept pace with the bottling plant and is currently well in position to maintain the sixty-million-a-year bottle output.

Approximately half of all market shipments now go out in new cartons, dependent on quotas for the period and the other half in reconditioned cases which have passed through the salvage shop. All new cases which come from glass manufacturers supplying the Roma concern are automatically sent back to the glass plant—a step absolutely necessary to insure plenty of undamaged glass, according to the plant management. Each new-glass carton as received goes to a forward-stock section on the bottling plant mezzanine and then is

placed on a gravity conveyor to the head of the bottling line concerned. As soon as the bottles are removed, the carton ceases to be Roma property and is moved off for reshipping to its source. Observance of this iron-clad rule plus other concessions to glass manufacturers has kept Roma's glass supply commensurately good.

Cartons at the other end of each line, where packaged wine is cartoned for shipment, are an entirely different story. Here the Roma Wine Co. is certain that at least half the cases used are "rebuilt" from its own salvage shop. Thus, every case in shipment bears a reminder to cooperating wholesalers to return it at once postpaid and each Roma invoice carries a similar stuffer pointing out that without sufficient shipping cases the chain will soon be broken.

Cartons are returned to the Roma plant knocked down and bound into bales by the distributor. A steady stream arrives at the salvage plant by freight or truck, each bale being earmarked for repair as soon as possible. From a reception dock they move to the shop itself, where a huge table equipped with special tools and facilities are set up to handle them.

All are sorted for size and type immediately upon reaching the table. Pushup bottoms, flat bottoms, gallons and quarts are thrown on separate piles. Those obviously unfit for repair are re-baled and transferred to the scrap mill. All others in the usable classification are repaired.

Reconditioning begins with removing all staples and wire from the cartons, after which those which bear other winery labels are turned inside out (many such are received). Where the cornering is weak or bent, a new inner liner is glued in place. All holes are repaired with scrap cardboard and strong paper tape or gummed sheets specially developed for the purpose. Ripped corners, a common deficiency, are restored by shrinking on cloth tape bound in heavy glue. In short, almost any minor damage which can be repaired comes under close scrutiny and one of several repair methods is applied.

Where a shipping case has one or more sides still in good condition, these are removed and cut into dividers for other cases. Others provide liners or strengthening, so that in the long run, nothing is wasted. Women do most of this work because of defter fingers and more patience and, in combination with men for heavy lifting and removing all old staples, can keep up a tremendous output comparing favorably with the bottling plant.

The reconditioned cartons, after paste and glue are dried, are rushed direct to the bottling room floor (unless in rare cases enough stock is already built up) and are usually on the way again within a few hours. Occasional relaxation of quotas allows a hundred thousand new cartons to be used, which is of course a "breather" for the salvage shop. All are delivered on flats direct to the tail-off man at the rear of each bottling line and are checked twice as used, by the line inspector and a check-out girl who sees that each case is properly glued shut and ready to make its trip to the market.

These methods, even finely developed as they are, have not been sufficient to guarantee a full supply of cartons as the bottling production mounted. Consequently, Roma has pioneered the technique of using wooden shipping cases (at an almost prohibitive expense) for in-state shipping. These were used moderately in 1944; then as out-state call for winery bottling grew heavier, the entire California market was supplied with wooden cases in three sizes. Transhipping of these cases has tied up the plant on notable occasions, but in the long run the project has paid excellent results. Roma, incidentally, is believed to be the only national winery to date to make use of wooden cases.

All new cartons from glass (Continued on page 174)

We go to 40-lb.

The observant eye of the package user, trained to detect minute differences in quality and texture of materials, will readily note another descending step in the quality of the stock used for this magazine. Beginning with this issue, and for the duration of the pulp emergency, MODERN PACKAGING will be printed on 40 lb. stock. Frankly, we don't enjoy this any better than our readers like to use substitute materials on their packages, but both they and ourselves will make willing adaptation to any measures that will help to share the shortages. And we believe that "you-all" would prefer that we go to lighter-weight paper rather than to reduce the amount of information we endeavor to present in each issue. Hearing no dissenting votes, we'll carry on with what is available, promising a return to normal packaging when Messrs. Hitler and Hirohito permit.

—THE EDITORS

A Gentle Reminder



We just did not want you to forget a few fundamental facts which may mean a lot to you now or could have some importance some day soon:

BURT specializes in the automatic production of small, round, square and oval set-up boxes. These are quality containers produced within price limitations on our own specially built equipment. Many of the largest packagers in the country use our service because they find it both economical and satisfactory.

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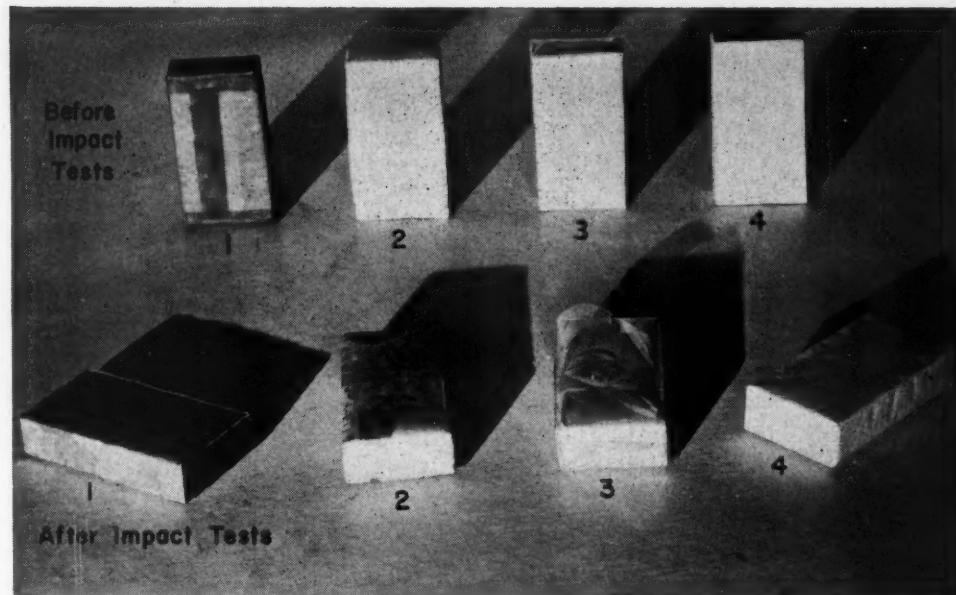
Over a Quarter Billion Packages per day are wrapped on our Machines

TECHNICAL SECTION

CHARLES A. SOUTHWICK, JR. TECHNICAL EDITOR

• MACHINERY
• PRODUCTION
• TESTING

1—Effects of low-temperature impact tests on overwraps and coatings: (1) Coating A. Entire surface of block affected; about 25% of coating area scaled off. (2) Coating D, overwrapped with light-weight sulphite paper to prevent blocking, did not crack or scale. (3) Single-sheet cellophane overwrap; long tears on sides of block. (4) Laminated waxed paper. No breaks or tears; efficiency impaired by minute punctures, flaking of paraffin coating; end folds slightly loosened.



Impact . . . effect on moisture barriers at low temperature

by William Rabak and J. B. Stark*

The drop testing method of evaluation of container durability has long been in use by container manufacturers and research workers.^{1,2} Ordinarily, this method is utilized to test the strength of outside shipping containers, rather than the unit containers packed therein. The method has come to be recognized as the most dependable criterion of the durability of large containers.

Since unit containers usually supply protection for packaged commodities against gain or loss of moisture, it is important to evaluate their durability and efficiency under actual handling conditions. It does not suffice to assume that a durable shipping container will guarantee the necessary protection for the unit packages. While comparatively fragile unit containers can be padded and packed in larger containers in a manner to afford considerable protection against breakage, it is not always practical or economically feasible to pack all products, especially foods, in this manner.

Preliminary tests in this laboratory have shown that experimentally compressed dehydrated food products, overwrapped with heat-sealable protective sheet materials and hermetically sealed in 5-gal. tin cans encased in an outer

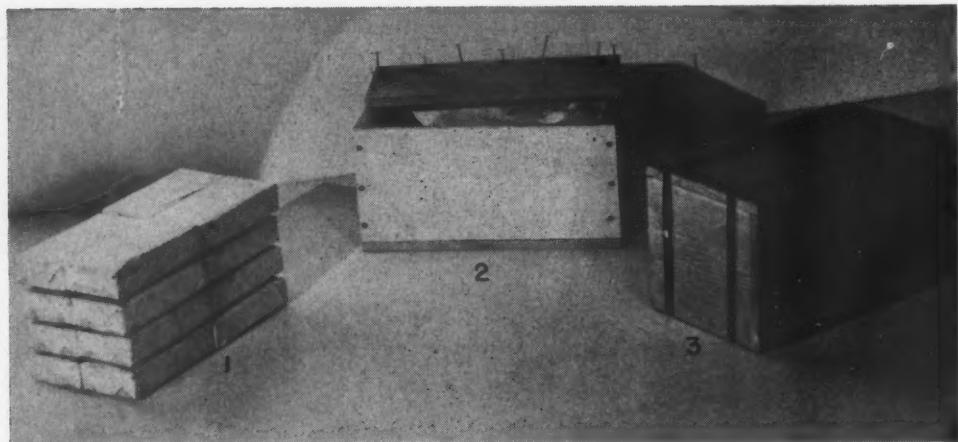
wooden container, withstand severe drop tests at room temperature without destruction of the wrappers or disintegration of the blocks. While this method of packing was effective, it is expensive and complicated. For this reason it appeared desirable to obtain information on the degree of protection supplied by two simple and economical types of packaging materials, namely, heat-sealable overwraps and thermoplastic dip coatings, when cased without cans.

Sheet wrapping materials

Previous studies indicated the desirability of including the four general types of commonly accepted, heat-sealable sheets suitable for overwrapping and heat sealing. The materials used were as follows:

1. Single-sheet cellophane overwrap (450-gauge, all-purpose, anchor-coated).
2. Laminated cellophane overwrap (two sheets of 300-gauge, anchor-coated cellophane, laminated with plastic adhesive).
3. Single-sheet waxed-paper overwrap (23 lb. sulfite paper waxed on both sides to 35 lbs. per ream (500 sheets, 24 by 36 in. in size).
4. Laminated waxed paper (two sheets of sulfite paper

* Western Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture, Albany, Calif.



2—Method of packing carrot blocks for drop test: Individually wrapped and/or coated blocks (1) were placed in a nailed wooden box (2), and steel strapped as shown (3).

laminated and then waxed on both sides to a total approximate weight of 72 lbs. per ream).

Thermoplastic dip coatings

Thermoplastic paraffin-base dip coatings for compressed vegetable blocks have been tested and found to supply greater protection against water-vapor absorption under ordinary conditions than heat-sealed sheet-wrapping materials. The effectiveness of the dip coating is in all probability due to the continuity of the protective film. The method eliminates the weaknesses inherent in heat-sealable overwraps having end folds and laps and results in protective coverings that are uniformly impervious to the penetration of water vapor. Such coatings, if flexible at low temperatures, provide an excellent protective barrier under all handling conditions.

It has been demonstrated, however, that the available commercial dip coatings are sensitive to changes in temperature and become inelastic at low temperatures. Some coatings when subjected to simulated handling conditions at 0 deg. F. are severely shattered and their protective characteristics are almost completely destroyed. For this reason it is essential that any method of evaluation of dip coatings include simulated handling tests at low temperatures. The coatings included in this study (see Table I) were types that manufacturers recommend for use in the protection of food products by the dip-coating method and have been extensively utilized for this purpose by both military and civilian organizations.

General procedure

Absorption of water vapor is one of the principal factors causing impairment of quality of dehydrated food products; hence resistance to the passage of moisture has become the principal criterion of package efficiency. Conversely, loss of moisture is a critical factor in the packaging of frozen foods. Packaging studies³ have shown that the rate of water-vapor absorption by packaged dehydrated foods is dependent upon the efficiency of the barrier as well as the differential in relative humidity at a given temperature between the inside and the outside of the protective covering or container. The method of appraisal employed in these tests is based upon the combined effects of the impairment of protective coverings due to simulated handling tests and the attraction of dehydrated carrots for water vapor.

The moisture content of commercially dehydrated diced carrots used in these tests was 6%. Tests have shown that dehydrated carrots are hygroscopic at this moisture level. For example, the moisture content of these compressed carrots overwrapped with porous kraft paper was found to increase

from 6 to 27% during a ten-day exposure to 85 to 90% relative humidity at 85 to 90 deg. F. Investigations⁴ have shown that packaged carrots containing 6% moisture are at equilibrium with a relative humidity of 35 to 40% inside the package. As the testing room atmosphere was regulated to a relative humidity of 85 to 90%, the initial differential between the packaged carrots and storage-room atmosphere was about 50%.

For the purposes of this work, dried carrots were compressed into blocks $2\frac{1}{4}$ by $4\frac{1}{8}$ by 1 in. in size, under a pressure of 800 lbs. p.s.i. at 165 deg. F., with a 15-second dwell. The blocks weighed 180 to 185 grams each.

Immediately after pressing, the blocks were tightly wrapped in 50-lb. bleached uncoated kraft paper and the side lap and end folds were secured with gummed tape. After cooling overnight in a holding press, the blocks were either overwrapped with the protective sheet materials or dip-coated. The uncoated porous kraft paper used as an underwrap served (a) to protect the overwraps against puncture by the sharp edges and corners of the carrots, (b) to act as a binder during the cooling of the blocks in the holding press and (c) to prevent the dip coatings from coming into contact with the carrots.

The side seams and ends of the four types of protective sheet materials were carefully heat-sealed with an electrically heated hand sealer, the temperature of which was adjusted to 285 to 300 deg. F. The dip-coating procedure was carried out as follows: Each coating was melted and the temperature raised 15 deg. F. above its melting point (fluidity temperature). Half of each overwrapped block was then im-

TABLE I.—PHYSICAL PROPERTIES OF COATINGS

Coating	A	B	C	D
Color	Lt. brown	Brown	Brown	White
Softening point, ° F.	117-126	126-131	131-136	75-80
Melting point, ° F.	171	140	147	162
Odor	None	None	None	None
Taste	Slight	Slight	None	None
Solubility in water	Nil	Nil	Nil	Nil
Consistency at 70° F.	Med. hard	Med. hard	Med. soft	Soft
Tackiness at 70° F.	No	No	No	Yes
Coating type	Paraffin base	Paraffin base	Not known	Microcrys- talline paraffin

mersed in the molten coating for one second and, after that half had cooled, the other half was dip-coated. By repetition of this procedure 3 times, an average coating thickness of approximately 1 mm. was obtained. In the case of coating D (microcrystalline paraffin) it was necessary to overwrap the blocks with lightweight sulfite paper after dipping to prevent the blocks from adhering to each other.

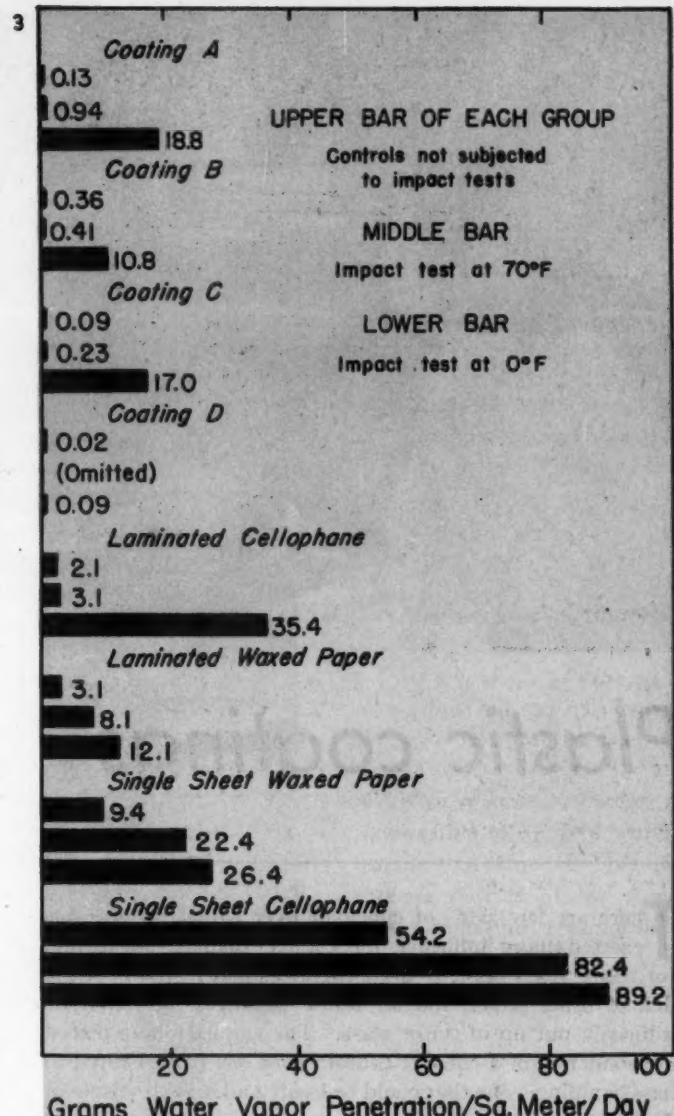
Impact tests

Special wooden boxes were necessary for carrying out the impact tests. The sides were made of $\frac{3}{8}$ -in. white pine boards and the ends with $\frac{5}{8}$ -in. boards. The inside dimensions were $5\frac{1}{8}$ by $5\frac{1}{4}$ by $9\frac{5}{8}$ in. The boxes were designed to hold 16 dip-coated or overwrapped blocks after they had been lined with corrugated glassine paper. A layer of four test blocks was placed flat in the bottom of the box; these were followed by two layers of dummy blocks and finally another layer of test blocks. This arrangement was adopted to assure uniform exposure of each block to abuse. After the top layer of test blocks had been covered with corrugated glassine, the lid was nailed on securely. To prevent distortion of the boxes during the impact tests, each box was then tightly strapped with five $\frac{3}{8}$ -in. steel straps, two lengthwise and three crosswise (see Fig. 2).

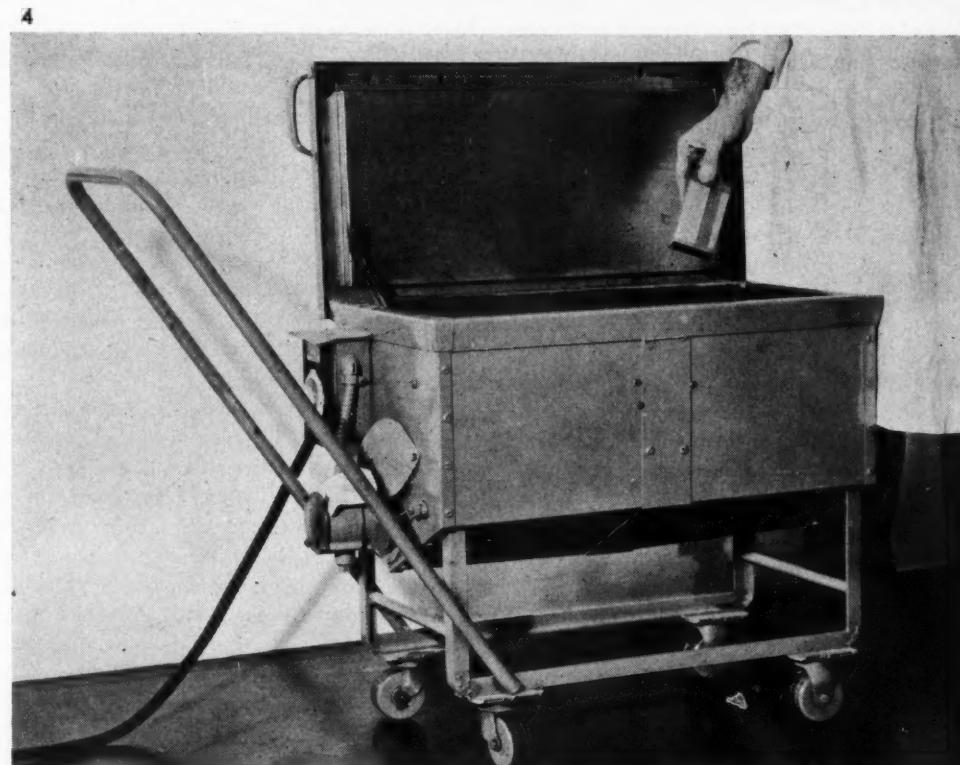
The completed boxes were stored at 70 deg. F. and 0 deg. F. for three days and the impact tests were then conducted at these temperatures. Each box was dropped 18 times through a distance of 24 in. on a solid wooden surface, once on each face and once on each edge. The boxes were then opened and the test blocks removed.

Water-vapor absorption tests

After removal from the test boxes, the blocks were protected against moisture absorption in a sealed container and brought to a temperature of 90 deg. F. The individual blocks were then weighed to ± 0.1 gram and held at 85 to 90 deg. F. and 85 to 90% relative humidity. Periodic weighings were made to ascertain the amount (Continued on page 166)



3—Comparison of effects of impact tests at 70 deg. and 0 deg. F. on water-vapor permeabilities. 4—An electrically heated dipping tank used in applying the dip-coatings.





1—*Flood friction coating. The method of application is important; some plastics give better results with one heavy coating, others may require up to ten light coatings.*

Plastic coatings . . . principles of application

by John B. Cleaveland*

There are few fields of endeavor over which the war has exerted more influence for change than in packaging. For many years prior to 1941, engineers had flirted with the idea of using paper, foil, or fabric packages for materials ordinarily put up in tin or glass. The emphasis was placed on production of a cheaper container, or one better suited to mass handling—one that could be easily and quickly disposed of after use. The necessity of a coating material to seal the paper or fabric was immediately recognized.

The coatings first used, generally of a pyroxylin or resinous nature, were derived from formulas intended primarily for decorative purposes. The protective values of such coatings were little understood and only sporadically studied. In general, these coatings were unsatisfactory from a moisture-vapor resistance standpoint and their cost prohibited production at a competitive price of what was originally conceived to be a cheaper product.

The application of such coatings posed several problems. The heat-seal properties of the early plastic materials were not good. The only safe way to coat a container was to immerse or spray it after formation. But the difficulty developed of evaporating a solvent from a confined area such as the inside of a container.

With our entrance into the war and the immediate shortages of critical war materials, it became necessary to produce packages that would be satisfactory substitutes for tin and glass containers without regard to cost. Investigation into plastic coatings was given tremendous impetus.

Plastics and synthetic rubber that were hitherto unsatisfactory for such coating were applied to paper, fabrics and foil. Materials were devised that would give an excellent heat seal and that would have an exceedingly low moisture-vapor transmission rate.

More and more things were packaged by the Armed

* Cleaveland Laboratories & Mfg. Co., Peapack, N. J.

Services to prevent the formation of rust and corrosion and to minimize the cleaning at the point of use. The problems of formulating protective coatings and applying them to paper, fabrics and foil became more complex. No one plastic was discovered to be the best, but the importance of blends of many materials became more evident.

In some cases, it was discovered that the coating of one plastic film over another proved more satisfactory and more resistant than a mixture of the two in one film.

New coating machines were devised, new combining materials worked out. Liquids were packed in fabrics that could be heat sealed into strong bags with a high hydrostatic resistance. Hydroscopic and medicinal powders were put up in small heat-sealing envelopes of paper. All manner of things from tiny precision meters to airplane engines and complete radio installations were packaged in plastic, foil, paper and cloth laminations and other Type II packaging materials. Perishable items, from rubber to bread, were protected with similar wrappings. Heat-seal finishes were devised that would enable the paper, fabric or foil to stick, not only to itself, but also to metal, glass or even waxed glassine.

Research has been carried on to determine the relationship between coating methods and coating formulation. It has been found that such a relationship definitely exists. Some plastics give more impervious films by flood coating when the entire thickness of film is applied in one heavy coat. Others react much better to very light filling coats where as many as ten passes through the machine are used to build up the proper film thickness.

For fabrics it is generally found desirable to build the film up gradually, first by filling the interstices, then by calendering and finally by applying flood coats either in a knife-spreading machine or a reverse roll coater.

For many requirements a heavy rubber coating calender

application is required. This is especially true in the case of thermoplastic materials which are not readily soluble. Such coating minimizes the reduction of tear strength in fabric coating, as noted in other methods. It is of benefit in producing strong films and fabrics.

Papers, foils and other materials with hard, smooth, non-porous surfaces are best treated by flood-coating with a roll coater. Such coatings will flow out to an even, impervious film. The adhesion with such method of coating and the appearance of the finished surface are found to be much superior to other means of application.

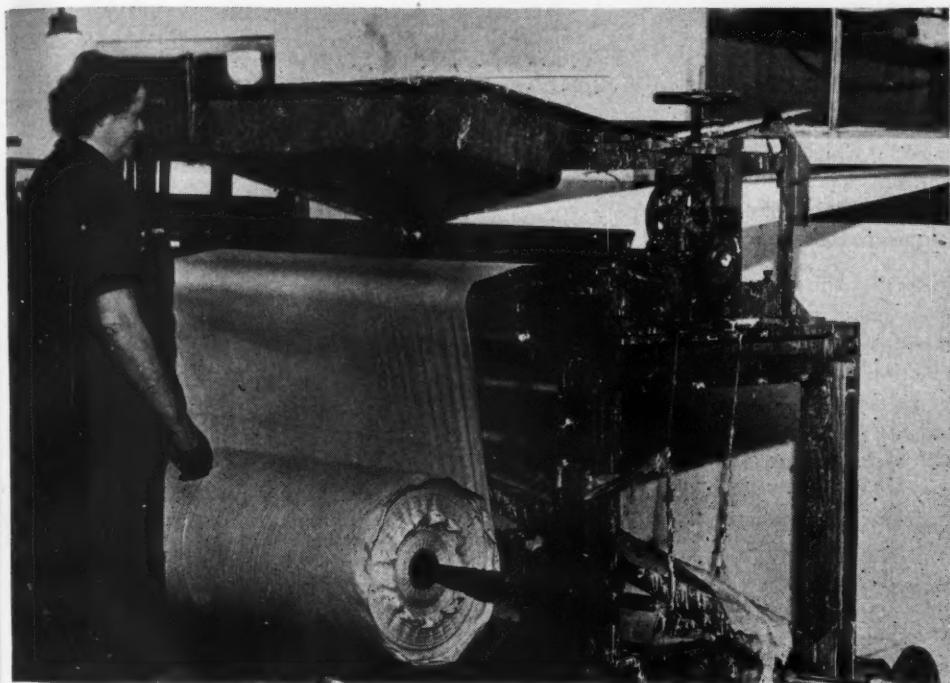
Close cooperation between the plastic-formulation chemist and the coating engineer is a necessity. No longer is it possible for a coating technician to adopt a rigid, unvarying method of application. The chemist must know the problems of coating and the coater must know those of the chemist.

The price of many of these new wrapping materials is still

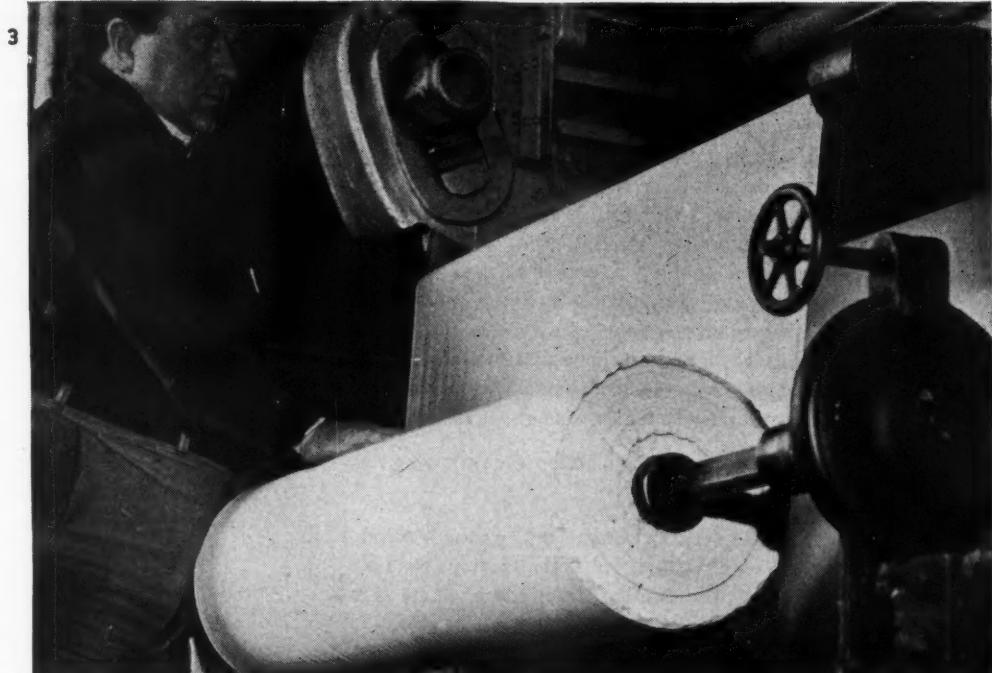
high, but the picture is clearing. The combination of the high protective quality they offer, plus the lighter weight that may be expected, will be a hard combination to beat and should be of great interest for the transportation of perishables by air cargo in the postwar future.

The needs of the Armed Services have definitely pointed the way for the field of plastic-coated paper, fabrics and foil, but the surface has just been scratched. The coating industry can offer materials with widely differing properties. They can produce a custom formulation to meet almost any requirements.

With the close of the war, the packaging industry will have available new raw materials in coated paper, fabrics and foil that may readily be adaptable to unusual problems. The packaging engineer will have at his call technicians in a new industry that will see both old and new problems through the vitality of a fresh viewpoint.



2—With a knife spreader, it is possible to apply a waterproof coating of plastic blends that is at the same time porous and "breathable."



3—Calender coating, is a method that has been found suitable for applying a heavy, impervious film to almost any type of fabric or paper.

QUESTIONS and *Answers*

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Defining bag, envelope and pouch

QUESTION: Our purchasing department has requested a definition of a bag, an envelope and a pouch. So far, we have not been able to find a completely satisfactory answer to this question.

ANSWER: We contacted several companies who have had long experience in the manufacture of items which we think come in the category of bag, pouch and envelope. The following is one of the answers which seems to sum up fairly well at least the existing trade practices in regard to these items:

"In the old days envelopes were always made from previously die-cut blanks but that is no longer true today. Envelopes can be made now from a continuous flowing web—just the same as a bag. Also, at one time envelopes were always made in the flat style, having no side tucks or bellows, but here again progress has made a change and envelopes—or at least what I would call envelopes—are being made with side tucks.

"The real difference between a bag and an envelope in my opinion lies in the difference in the lip:

"If the lip is attached to the face of the container, folding over to the back when closed—it is an ENVELOPE.

"If the lip is attached to the back of the container and in order to close the package one must fold the lip over on to the face—it is a BAG.

"When there is no lip at all and many containers are now being made without lips, then in my opinion there is no difference between a bag and an envelope unless same is made out of die cut blank and then it is an envelope.

"As far as the pouch goes—it can be either an envelope-style pouch or a bag-style pouch. However, generally speaking, pouches do not have a bottom seam. They are manufactured with what I call double side seams and it is style rather than method of making that causes one to name any container a pouch. A pouch is usually wider than it is long and, in addition, it has a lip much longer than is ever seen on a bag or an envelope. In some instances the lip can be even twice the length of the pouch itself.

"Generally speaking I would say that a pouch is a specialized form of envelope with features as above described."

Another member of this industry has added the following definition which is that:

"If the lip is folded over on the same side as the bottom, then the package is an envelope, but if the lip folds over on the opposite side from the bottom, then the package is a bag."

However, if there is no top lip, there can be no differentiation

between a bag and an envelope except, as previously pointed out, the use of a die-cut blank is generally accepted in the trade as being an envelope.

Calculating double-wrap moisture transmission

QUESTION: We are interested in the theoretical as well as the practical side of double wrapping a package. Would we double the protection with two wraps and can you please explain the way in which the final moisture transmission of multiple plies can be calculated?

ANSWER: Water-vapor permeability is generally reported as the weight of water vapor which is transmitted in a unit area of a material in 24 hours at a specified temperature and humidity gradient. A very commonly used value is grams per hundred sq. in. per 24 hrs. at 100 deg. F. at approximately 42 mm. of vapor pressure differential. This transmission value is the conductivity of the material and can also be called the water-vapor permeability rate. It should not be called the water-vapor resistance.

Using as an analogy a simple electrical circuit, the vapor pressure is equivalent to the voltage across a resistance and the quantity of water vapor which flows is comparable to the conductivity.

The total resistance of several resistances in a series (i.e., connected consecutively) is electrically expressed by the sum of the individual resistances. For example: $R + R_1 + R_2 \dots = \text{Total } R$. This same reasoning applies to multi-plies of moistureproof materials, since when they are imposed one upon the other, they represent a series resistance to the movement of water vapor either from the inside out or in the other direction of flow. In the case of packaging materials, there is no value which represents resistance since the figure for grams transmission is the measure of conductivity. However, conductivity is the reciprocal of resistivity. Therefore, this can be written:

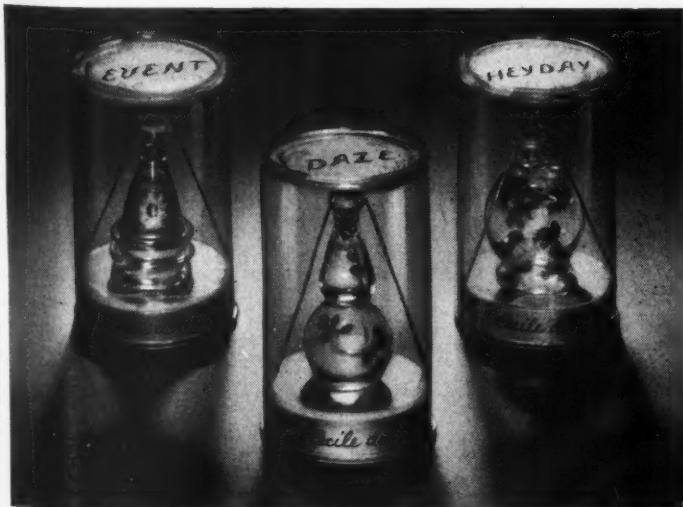
$$\frac{1}{C} + \frac{1}{C_1} + \frac{1}{C_2} \dots = \frac{1}{\text{Total Conductivity}}$$

Now, if in place of C we put the transmission values of the individual films in a multi-ply barrier, we will then be able to calculate the final moisture-transmission value for the compound layer of materials. This calculation applies reasonably well in cases where the films are in close contact, but does not give reliable results when the films are not in close contact or are separated by any measurable distance. An example of these calculations would be as follows: The final transmission of two sheets of cellophane from the same roll, when laid together, can be calculated if (Continued on page 170)



POSTWAR . . . Eastman Acetate Sheet will be available again in quantity.

Dressed up ... to go places



NESTLING in crystal-clear containers like these, a product is bound to be *more desirable*.

Bound not only to gain distinction—but to *keep it*, thanks to the protection Eastman Acetate Sheet provides. Because dust and sweaty fingers are kept off, shopwear is successfully avoided. The customer sees and gets merchandise that has its best foot forward.

Retailers, too, will welcome postwar products packaged in flattering Eastman Acetate Sheet, products that promise both increased turnover and reduced losses from handling.

Now is a good time to look into the value of such glistening *individual showcases* for your postwar product—even though the entire production of Eastman Acetate Sheet still must go to meet military needs.

KODAK PACKAGING LABORATORY is at the service of your package designers. They and you are invited to bring your packaging problems here. For appointment, or for detailed written information, address Chemical Sales Division, Eastman Kodak Company, Rochester 4, N. Y.

HIGHLY VERSATILE Eastman Acetate Sheet can be crimped, sewed, or stapled. It can be sewed, folded, pleated, molded, or drawn . . . and takes printing inks without wrinkling.

THREE TYPES are produced, in sheets or rolls—Clear Transparent—Matte Translucent—Colored Translucent.

These brilliant, clear slipover covers are fashioned from cemented cylinders of Eastman Acetate Sheet, beaded at upper edge. Top is formed of circle of same material over printed cardboard, both forced against bead.

**Eastman
Acetate Sheet
attracts . . . protects . . . sells**

"Ceilings" are saving you money



* 64 months after war started

It's a far longer and more expensive war than the last one—but this time the cost of living hasn't been allowed to get out of hand. If you're ever tempted to grumble at price-and-wage controls, look at these charts—and DON'T. They're one reason to bless ceiling prices...and to check 'em whenever you shop. (They're posted for your protection!)

Rationing gives all a fair share



The Millionbucks get no more points than the poorest folks in town. Necessities are rationed to see that each gets his share. And rationing also keeps prices down: without it the fellow with the biggest wad of dough would have a terrific edge. Share and play square... pay points for everything you buy. (And shun black markets like the enemy they are!)

— and the money you DON'T SPEND helps hold living costs down

The plain bread-and-butter fact is this: there's about \$1.50 in people's pockets for every dollar's worth of goods in the stores.

Splurge—buy anything you don't actually need—and you put the heat on everything to rise all along the line.

Save—deny yourself something you want but can get along without—and you help yourself a little today and a lot tomorrow.

Squeeze that budget. Squeeze a little more money into your savings account. Squeeze a little more into insurance. Squeeze yourself into buying another War Bond today... and every month from now on in.

Wise enough to harness your money for your own safety?

ONLY YOU CAN DO IT.

MODERN PACKAGING



A United States War Message prepared by the War Advertising Council, approved by the Office of War Information; and contributed by this magazine in cooperation with the Magazine Publishers of America.



MORE PROOF OF LOWER COST PER CONTAINER



THE PRODUCTS illustrated on this page are household words in nearly every American home. It almost goes without saying that they have been packaged the modern way by Pneumatic Packaging & Bottling Machinery.

Such important products play a significant part in the standard of living that this country has achieved. Pneumatic research, design, and engineering have helped in no small measure to reduce the per unit cost of such goods — thus making them increasingly available to all income groups.

Where famous products are packaged and bottled in great quantity, there you will find Pneumatic Machines, turning in continuous precision performance that spells lower cost per container.

PNEUMATIC SCALE CORPORATION, LTD.
82 Newport Ave., North Quincy 71, Mass.
New York San Francisco Chicago Los Angeles

FIFTY YEARS OF PROGRESS
1895-1945

PNEUMATIC
PACKAGING AND BOTTLING
MACHINERY

BELIEVE ME... FOR TROUBLE-FREE PACKAGING YOU CAN'T BEAT CANS!

Products in cans are protected from air and light—and cans don't break . . . are easy to ship, store, display

- "You can take my word for this . . . when it comes to packaging my products, no container can equal the steel-and-tin can. For us manufacturers, and for retailers and consumers, too... cans are so trouble-free!"

"To begin with, cans seal out air and light, prevent quality deterioration. And cans don't break. Neither do they crack, split, or tear. They're light and compact . . . economical to pack, ship, handle, and store...easy to display.

"Smart and colorful can labels (which can be lithographed right on the cans) make products stand out on retail shelves . . . attract buyers' attention . . . make brand recognition easy . . . help build sales.

"I say...let's give the public what it wants! As soon as there's an unlimited supply available again, I'll pack my products in cans!"

REMEMBER THESE **5 MAJOR REASONS**

Why Consumers Prefer Goods in Cans

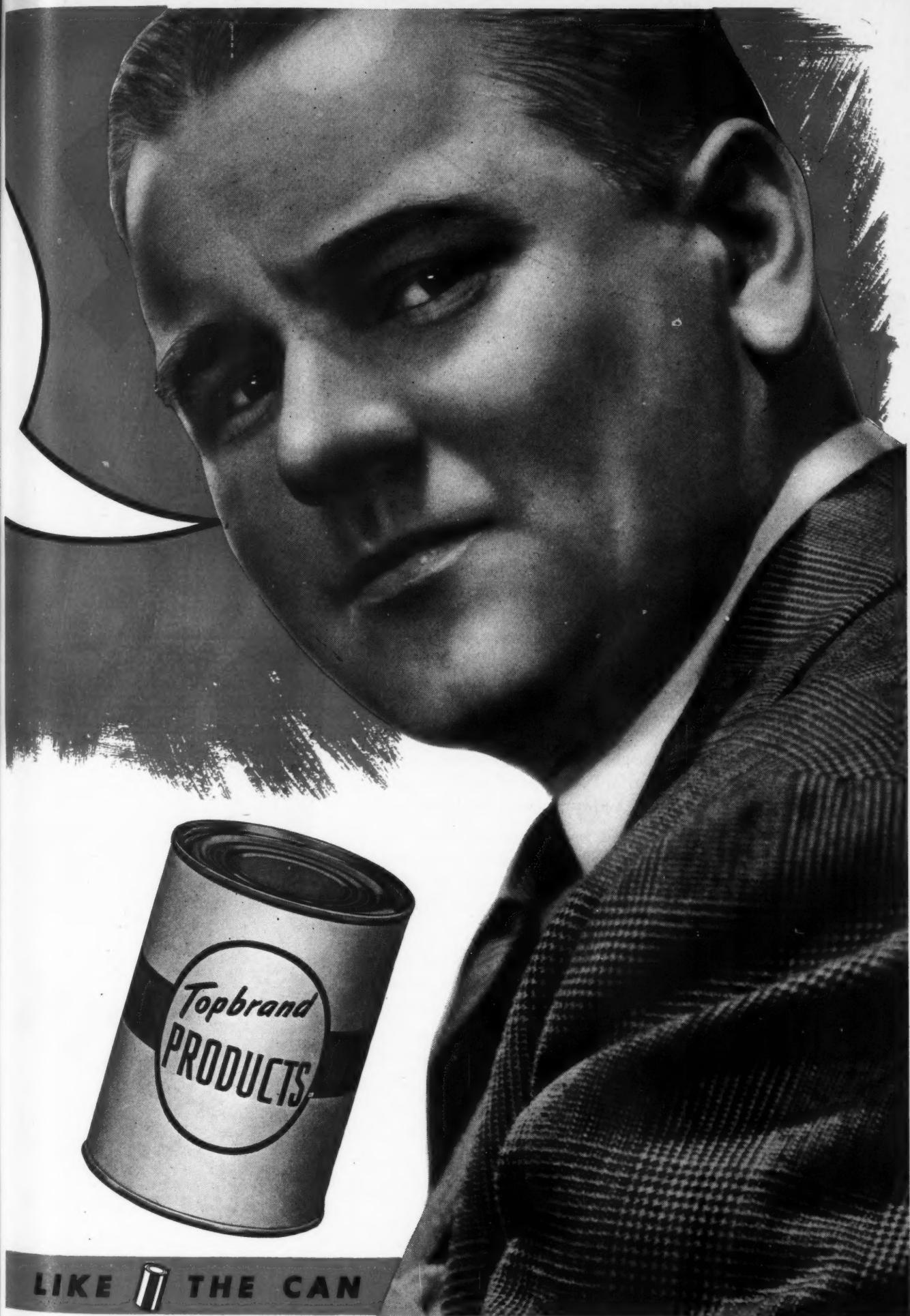
1. Cans don't break, crack, split, tear.
2. Goods in cans keep better, longer.
3. Cans prevent air- and light-spoilage.
4. Cans are more convenient.
5. Cans are more economical.

CONSUMER AD CAMPAIGN GROWS!

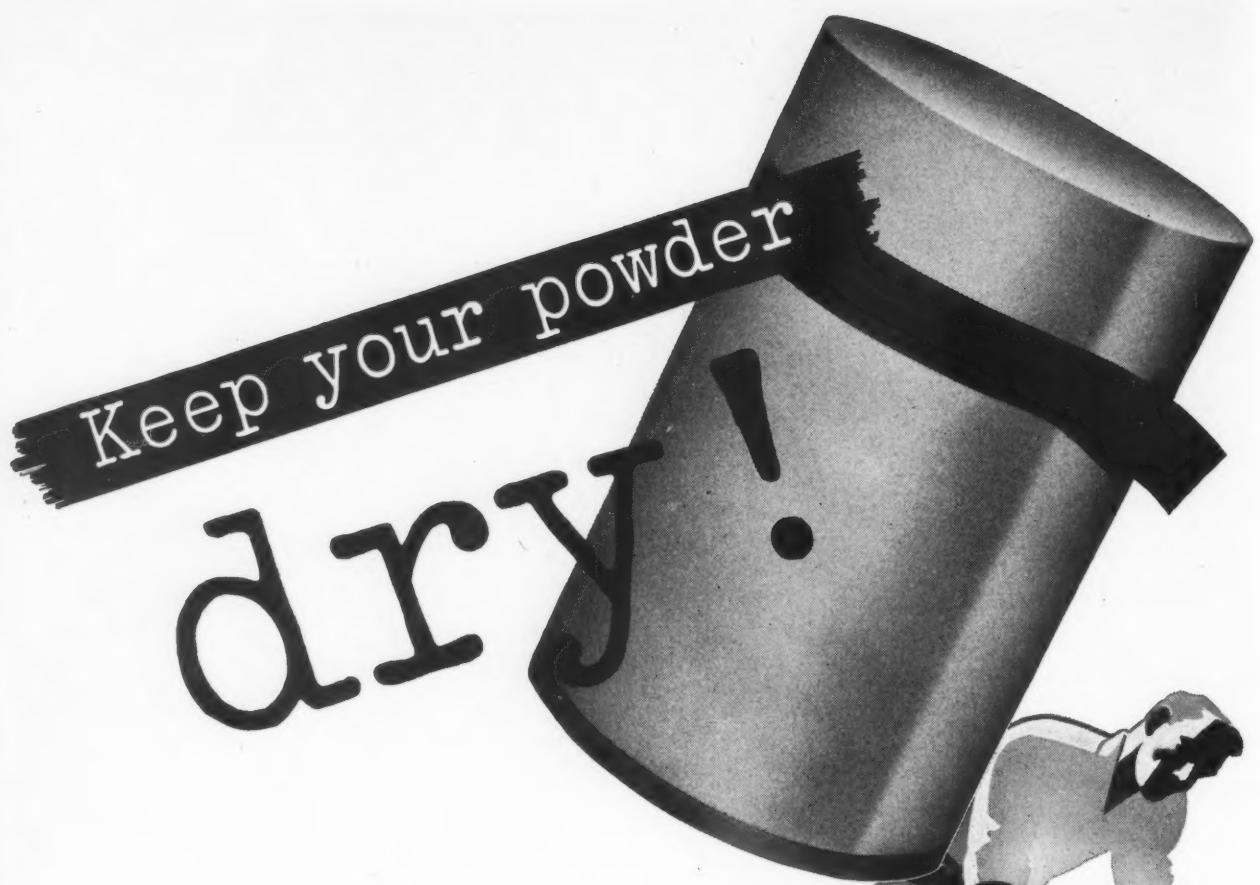
More than 34,000,000 printed messages now appear each month in LIFE and ten other national magazines, and in Sunday supplements from coast to coast. Full-page, full-color ads tell shoppers everywhere about the many advantages of the steel-and-tin can.

CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK

NO OTHER CONTAINER PROTECTS



LIKE THE CAN



In this case it's plastic powder... but—

this idea might help you with your packaging problem:

A manufacturer looking for a simple, effective way to seal drums of plastic powder found MYSTIK TAPE the perfect answer. This "self-stik" tape goes on in a single operation... forms a perfect moisture barrier... strips off easily... can be replaced again and again to protect partly used contents.

Developed especially to meet wartime needs, MYSTIK TAPE has helped solve some of the toughest packaging problems of all time. Tons of equipment go overseas daily, *MYSTIK-sealed*—everything from blood plasma and drinking water kits to bombers.

This rugged cloth tape with its powerful self-stik adhesive protects against water, salt spray, corrosive gases, odors, other damaging elements. In addition it is *fungicide-treated*.

Have you a packaging problem for a postwar product? Are you designing new packages or redesigning old ones? Do you want ideas for better product protection, handier construction, better design? MYSTIK Self-Stik TAPE will help you with all these problems.



FREE—Write for a sample roll of
MYSTIK now, without any obligation.
Let it help you create new packaging ideas. *Mystik
Adhesive Products, 2641 N. Kildare, Chicago 39.*

MYSTIK
Self-Stik
ADHESIVE PRODUCTS



FOUNDED BY E. H. ANGIER IN 1895

FRAMINGHAM • MASSACHUSETTS

FIFTIETH ANNIVERSARY MESSAGE TO OUR FRIENDS

A Half Century isn't so long, after all. Looking back across the years to 1895, it seems but recently that I started a new business at Quincy, Massachusetts—the business from which our present company has developed.

The fact that so many first friends are still with us today (such as the General Electric Company, which placed an order in 1897, two years after we began) is evidence that, in a measure, we have achieved what we set out to do—first, to manufacture "protection" in which shippers would have faith—and second, to maintain a standard of service in which dependence could be placed at all times.

While our entire production of Waterproof, Corrosion Preventive and Building Papers is still devoted 100% to war purposes, we are looking ahead, confident that many of the protective packaging experiences we have had under the stress of war emergencies will be very useful to our friends in the postwar period to come.

It is needless to say that it gives me great satisfaction to have been actively on the job (as I still am today) during the entire span of fifty years. To those whom I know personally, and equally to others who have favored us with their friendship in the form of orders from near and far, I send greetings and best wishes.

Very sincerely,

FOUNDER AND PRESIDENT
ANGIER CORPORATION

1895
TO
1945

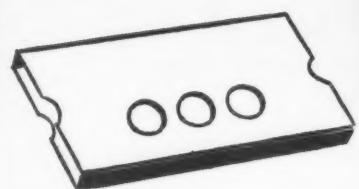
Angier

50th Anniversary

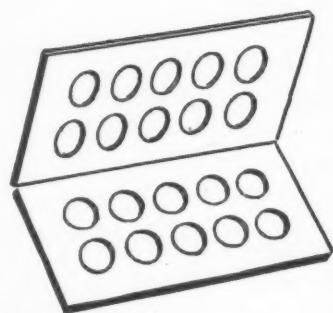
*In writing for samples and
literature, please men-
tion Modern Packaging*

A HALF CENTURY OF PROTECTION TO THE PRODUCTS OF OUR NATION AND ITS INDUSTRIES — IN PEACE AND WAR

A Sanitape-Sealtite Contribution To Packaging



1 Attractive "Window" Container



2 Inner Protecting Board



3 Product—Sealtite Wrapped

One of a thousand and one unique packages

It May Be Your "Baby," but in transit it's just another package—to be gotten rid of as fast as possible. You may view it on your desk and decide that **this** package has perfect consumer appeal—but if it's mutilated and powdered when the recipient has his first look—much careful planning has gone for naught.

Your "Baby" In Sanitape-Sealtite wrapping has superb sales appeal and protection right to the time it is opened—and without paying a premium for heavy, expensive, packaging materials. Consider the package shown above—it has everything, literally. And **you** have the advantages of contract packaging.

CONTRACT PACKAGING DIVISION

Section of Our Bonded Store Room

One of our many modern and efficient departments is indicated here. The complete service includes—Receiving your product in bulk and storing in bonded store room—Unit wrapping by Sanitape-Sealtite—Completing various sized packages including insertion of literature—Return to you, or shipment to specified destination—Contract Packaging is efficient, dependable and economical—we shall be glad to discuss the possible advantages in your particular situation.



I V E R S - L E E C O M P A N Y

NEWARK, NEW JERSEY

PACKAGES, METHODS AND MACHINERY FULLY COVERED BY U. S. & FOREIGN PATENTS

Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment—assuring convenience, protection and maintained efficacy.

If your material or
package must provide

GREATER RIGIDITY
PROTECTION AGAINST
MOISTURE, ACIDS, ETC.
CONSUMER APPEAL

New
Catalog
just off
the press

Get The Facts About WALDRON LAMINATORS

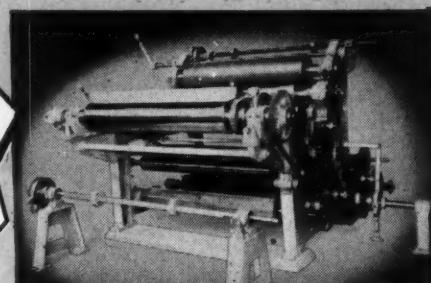
These are the machines used by practically all the leading converters for producing the basic materials for an almost unlimited number of popular products. Waldron Laminators are built to handle from two to ten or more webs combining such materials as paper, board, cloth, Cellophane, Pliofilm, metal foil, varnished paper, felt, sisal, burlap, wire, wadding, etc., at speeds up to 700 feet and more per minute. Designed for any type of adhesive embodying advanced methods of guiding controlling and drying, Waldron Laminators are providing the essential properties required, speeding up output and lowering production costs.

Send us the details of your laminating problem or requirements. Profit from Waldron's long engineering experiences in this field. Copy of our new descriptive Catalog No. 118 is available on request.

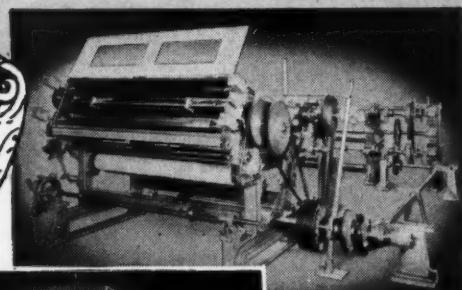
Aniline Printing Ma-
chines
Combining Machines
Crepeing Machines
Floor Covering Ma-
chines
Gumming Machines
Rubber Mill Machines
Wall Paper Printing
Waxing Machines
Winders and Slitters
Special Design Ma-
chines

JOHN WALDRON CORPORATION
Main Office & Works — NEW BRUNSWICK, N. J.

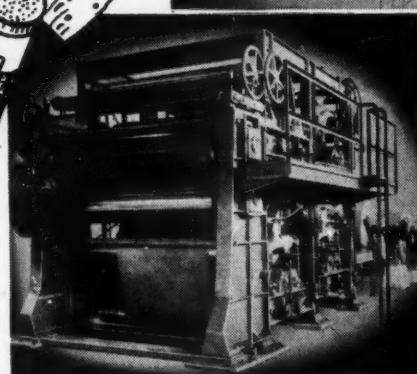
WALDRON
Paper Converting Machinery



Waldron—2 Web Laminator.



Special 2 Web Laminator for applying Cellophane to paper or board.



Five Web Laminator
—fast running wide
special unit.



WASHINGTON REVIEW

by R. L. Van Boskirk

● **Containers More Critical**—"The container problem is partly the result of manpower and partly the result of shortages of materials, which will become still more acute in the second quarter," said Hiland G. Batcheller, chief of operations of the WPB in reporting recently to the Production Executive Committee. He listed containers as constituting a new critical program, saying, "We apparently are not going to have enough containerboard, cotton bagging, steel pails, steel strapping, crates, shooks and boxes, or other types of containers to package all of our authorized production and we are going to have to make a decision as to who takes the necessary cuts."

(This situation was forecast in a MODERN PACKAGING editorial in August 1943, in a plea for "more equitable distribution of the necessary cuts.")

Controls and allocations overlap and interlock. Rosin, for instance, must now be restricted to "preferred orders." Paper and paperboard are recognized as being entitled to 70% of the amount used in the corresponding quarter of 1944 to fill all orders, preferred and civilian.

● **WPB Cracks Down**—The Compliance Division of the WPB is finding it necessary to crack down on individual companies whose urgent need for shipping containers betrayed them into reporting incorrect figures on which to base quotas. One Pennsylvania company and one California concern were ordered to make substantial reductions in their 1945 use of fibre containers. The overall situation is critical enough apparently to warrant such action, certainly to require everyone to be scrupulously careful in calculating quota figures.

Some lines of business appear to be quite reconciled to reduced quotas of shipping containers because of corresponding or greater reductions in raw materials for their products. The Carpet Sweeper Industry Advisory Committee, for instance, at its recent meeting, listened to members' reports of difficulties in obtaining sufficient cartons to pack the number of sweepers currently being produced. They doubted whether enough would be available if production were increased.

● **Set-up Box Pulp Still Tight**—WPB told a joint session of the Folding and Set-up Box Advisory Committees that allocation

of pulp for boxboard during the second quarter would probably be less—certainly nor more—than in the first quarter. The shortage, estimated at about 100,000 tons over all, will be felt chiefly in white pulp and unbleached kraft.

Pulp allocations have been a pretty tough problem recently. Decreased production in late 1944, transportation snags and bad weather in early 1945, didn't help the situation, which calls for continued conservation and salvage collection.

Ten grades of paper or paperboard are on "preferred production status," according to Amended Direction 1 to WBP Order M-93. They are:

Milk-bottle stock.
Milk-bottle hood and lip-cover stock.
Liquid-tight container stock.
Cup- and round-nested food container stock.
Cup-lid stock.
Ice cream and frozen food container stock.
Butter-carton stock.
Milk bottle plug-cap stock.
Double kraft-lined arsenal board and similar specifications.
Ammunition containerboard and similar specifications for armed forces.

Providing ice cream container stock is particularly significant—there's a new program under way for adding ice cream to soldiers' bill of fare on the battle front—and nobody will let home needs interfere with carrying out that project. Estimates are that this will require 400,000,000 cartons suitable for packaging ice cream made in the battle areas. WPB has issued tentative specifications for deliveries to begin in April, calling for sanitary, odorless boxes made of a colored board with reduced reflectivity so that discarded packages will not attract attention. They must be shipped flat, protected against fungus and mildew by weatherproof moisture-resisting shipping containers.

● **Kraft for V-Board**—V-boxes—very properly—continue to get a big allocation of kraft pulp. When the Containerboard and Fibre Box Industry Advisory Committee met recently, they heard complaints from the Navy about the failure of certain types of fibre containers to stand up under service conditions. Members of the com-

mittee asked for new specifications to insure standardization of manufacture of stronger and more stable boxes.

● **New V-Box Plant Authorized**—Plant capacity for production of containers, especially V-boxes, has never been more heavily loaded, so it is easy to understand the Army's authorization of an expenditure of \$1,200,000 for constructing a plant for the production of fibre containers. This will be at Pine Bluff, Arkansas, to be known as the Ammunition Container Corp. Project; work will be supervised by Army Engineers of the Little Rock District. The action may be too late to relieve the present acute shortage before cutbacks set in.

● **Bad Weather Hits Salvage Program**—Waste collection is still suffering from bad weather. Basements are full of accumulated scrap paper, but the January collections were 8% below the 1944 average. Until the virgin pulp situation is vastly better than it is at present, heavy reliance will be on salvage. Present salvage stockpile is far below a safe level, according to WPB's Salvage Division.

● **Swedish Pulp Surplus**—Meanwhile, according to a report published in Foreign Commerce Weekly (U. S. Dept. of Commerce) our Swedish friends have an embarrassing surplus of pulp. "Warehouses are bulging with unaccustomed surpluses," says the article, which was digested from a report by Grant Olson, Attaché, U. S. Legation, Stockholm. Excerpts follow:

"The already acute storage problem increases in magnitude. It has been necessary to use numerous small ships not otherwise needed to store part of the excess.

"England is the only country with which Sweden has so far been able to conclude definite contracts for post-war delivery of wood pulp. . . . United States, French and Netherlands interests have expressed the desire to negotiate purchases of pulp for delivery after the war but apparently have not gone so far as to stipulate exact quantities or prices at which they would be willing to accept delivery. This has caused no little concern among Swedish pulp manufacturers who are anxious to resume normal trade relations with their important pre-war foreign markets. . . . United States ceiling prices

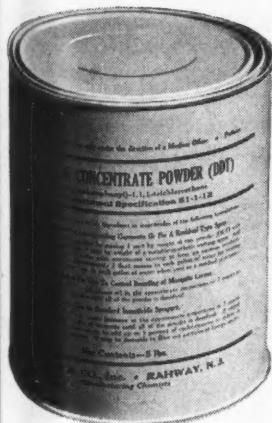


Crown Cans

**guard conqueror of
disease-bearing pests !**

IN the development of DDT, destroyer of the malaria-carrying mosquito and the typhus-bearing louse, scientists see a day when the earth will be forever rid of two scourges that have recurrently decimated populations since time immemorial.

Merck & Co., Inc., of Rahway, N. J., who manufacture it for the U. S. Navy, take the precaution to package this new wonder insecticide in Crown cans. For, despite the rigors of many handlings and widely varying climatic conditions incident to the thousands of miles this vital chemical must travel, Crown cans assure its complete protection . . . the retention of full strength . . . thus preserving the lethal qualities of DDT ready for lifesaving service in pestilence-endangered areas throughout the world.



★ ★ **CROWN CAN** ★ ★

INDEPENDENT AND HELPFUL

CROWN CAN COMPANY • NEW YORK • PHILADELPHIA
Division of Crown Cork and Seal Company, Baltimore, Maryland

are said to be the primary source of uneasiness with regard to American-Swedish pulp trade, some Swedish circles having intimated they consider such prices too low, particularly if they must sustain freight and insurance costs."

Sweden's industrial capacity for the production of sulphite pulp in 1943 was estimated at 1,720,000 metric tons (roughly the equivalent of our long ton) and of sulphate pulp (for kraft papers mainly) 1,210,000 metric tons. (U. S. normal consumption is in the neighborhood of 20,000,000 tons for all purposes, of which packaging takes perhaps 7,500,000 tons.) Swedish exports for 1939 included 172,000 metric tons of sulphite pulp and 67,000 metric tons of sulphate pulp. In 1944, all Swedish exports of paper up to mid-September were on consignment to Germany, amounting to 31,000 metric tons (mainly kraft) up to August 15. Later in the year small quantities of various kinds of paper were shipped to Denmark, Switzerland and Portugal. Little official information is available concerning pulp and paper prospects in other North European countries. Finland's output may go to Russia, though apparently Russia prefers machinery and ships. Norway, still enemy-occupied, is unpredictable. Probably it's a matter of at least one or two years before pulp and paper industry there will look anything like normal.

● Pulp Shortage Affects Many Packages—Of course our pulp shortage is reflected in the availability of many types of packages. For instance, amendment to Shipping Sack Order L-279 says if you pack fish meal, fish scrap, tankage and meat scrap, you can't use any greater quantity of paper shipping sacks than your 1944 consumption. Other products are not affected. Like many WPB orders, this one is surprisingly mild. WPB issues warnings—for example, like the recent one about the likelihood of fewer grocery and variety bags, wrapping papers and shipping sacks—and to this observer it looks as if the prime result is an opportunity to stock up and help make the shortage more acute. This is what the published announcement says: "Within the next quarter, kraft products must be placed under close control, as are the critical metals."

In the meantime, the fibre drum situation shows a slight improvement as to production conditions, in spite of slow deliveries of paperboard due to bad weather, freight embargo and fuel shortages, according to WPB's report at the March meeting of the Fibre Drum Industry Advisory Committee. When second-quarter allocations of paperboard for fibre drums are made (probably late in the month) it may be necessary to make further restrictions under Order L-337.

● Metals Continue Critical—Most metals continue critical, because of the military situation. As far as that is concerned, nobody in Washington will give utter-

ance—officially—to any other prediction than "continued critical." They got their fingers pretty badly burned during last summer's premature optimism. Now, even though they could say, "Well, the Army thought that way too," WPB is inclined to let the Army have anything it wants. Which, of course, is the safest policy and one which we are not inclined to criticize too harshly. But note, there is an undercurrent of admonition to be ready for changeover.

For now, aluminum is again critical—the Army needs it. Same with nickel. Steel container requirements will be stepped up. For one thing, the Army Air Force has adopted a new method of packaging aircraft instruments and accessories which calls for steel containers instead of wood and fibre type containers. These will range from $3\frac{1}{2}$ to 22 in. in diameter and are designed to be airtight. These new containers will be purchased directly by the Government and furnished to all contractors making the products.

● Watch H.R. 2390—Bill intended to restrict encroachments of FTC in enforcement matters properly in province of FDA and require "preponderance of evidence" as basis for FTC's orders will come before House Interstate & Foreign Commerce Committee soon.

● Marking Device Material Short—Marking device manufacturers, suffering shortages of materials—mostly metal—and manpower, requested WPB assistance in obtaining "essential" rating from WMC.

● Steel Drums and Direction 3 to L-197—If you are a steel drum user, better look over WPB's Direction 3 to L-197, which explains the "alternate quota method" of computing the tonnage of new steel drums for products listed in Schedule A of the order. This Direction 3 says that the alternate quota is the same as the tonnage of new steel drums permitted as the quota for the fourth quarter of 1944. A "carry-over" from the 1944 fourth quarter surplus is permitted, subject to deductions.

One producer of steel drums has been forbidden to sell or deliver any steel shipping drums during the next three months on any orders other than those of the Armed Forces or Governmental agencies. They had made unauthorized sales of 109,966 steel drums between March and June 1944, compliance officials said.

● Small Drums and Pails Most Critical—Most critical needs for metal containers are in the small drum and pail field, according to WPB's report to the Steel Shipping Containers Industry Advisory Committee. Prospects indicate material increases in demand for these small sizes on the part of Army, Navy and Air Forces. As in every other field, these manufacturers suffer shortages of manpower, lower material inventories and transportation difficulties, which are slowing deliveries.

When OPA presented outlines of a new price regulation for steel drums, the manufacturers agreed to assist in securing the necessary data to complete the study.

● Tin Containers Will Be Tighter—Tin controls must tighten still more, says WPB, because the stockpile has reached a dangerously low level. For most people in the packaging field, this is of mere academic interest. All the tin they know about is in the form of a suggestion of that metal on electrolytic-coated cans. It comes as a surprise to learn that it was only in December 1944 that WPB imposed its last restrictions on the use of tin for costume jewelry, novelties, trophies, toys, games, etc., although there have been other restrictions for these for three years.

There's still a lot of tin to be obtained from salvage and one of WPB's recent amendments to Order M-325 is designed to stimulate increased preparation and collection of used tin cans. They remind us that the major sources of tin are still in the hands of the Japs. (Seems to us we said something like that last January.)

● More Cans for the Army—Can manufacturers are getting ready to furnish increased quantities of metal cans for packing military items, on the advice of WPB officials, who predict second quarter requirements 20 to 25% above the corresponding period for 1944. Seasonal demands will be at their peak during the next three or four months, so the industry is looking ahead in efforts to meet manpower needs. Although M-81 was relaxed in January to permit manufacture of some cans previously prohibited, those types will probably not be made yet because of tight steel, short manpower, and heavy production load.

● New Rating Order for Steel Strapping?—Increased needs for steel strapping for packaging military goods will probably bring a new rating order regulating the use of this material. Details of the proposed rating order were discussed by WPB with the Advisory Committee of that industry.

● Textile Bag Regulations Equitable—According to WPB, the textile bag industry is satisfied with present regulations, considering them responsible for an uninterrupted and equitable flow of bags throughout the country in spite of a scarcity of suitable cotton cloth. There is little hope, WPB said, for any increase in the United States burlap allocation by the Combined Raw Materials Board.

● Special Packaging Price Boost Authorized—OPA authorizes sellers of commodities other than food to Government agencies to increase their charges for special packaging to meet specified requirements when they perform the packing operation themselves. Suppliers of foods bought by war procurement agencies will base charges on customary accounting practices.



Reports prove the greater safety of Sherman V-28 for use in Method I packing. An A+ paper, Sherman V-28 surpasses all government specifications for Grade A* papers, with two highly important advantages:

Two Great Extras

1. Extra greaseproof protection...twice the protection required by government minimums!
2. Corrosion Inhibitor...treated with a positive corrosion-inhibiting compound. More than non-corrosive...it's anti-corrosive!

A+ protection for an assembled, replacement part. Hydraulic selector valve for the Republic Thunderbolt fighter being wrapped in Sherman V-28 (Grade A, Type II).

Try Sherman V-28...check its multiple protective qualities. Ask for wrapping samples...and the valuable "Speed Packing Manual for War Materiel" with its 130 photographs on better packaging.

*U.S. Specifications 100-15A, 39P16b. Sec. 21, AN-P-12b.

What are your Packaging Requirements?

Sherman protective products include many types, for a great range of packaging needs:

Food-Packaging Products.

Baking-Pan Liners—a money-saving, dual-purpose pan-liner and packaging tray.

Cushioning Products—safer protection for every breakable product.



Yessir! We're interested in safer, protective packaging. Send the following (no cost or obligation):

Sherman V-28, and "Speed Packing" Manual
 Other Protective Products

NAME _____

COMPANY _____

STREET _____

CITY & STATE _____

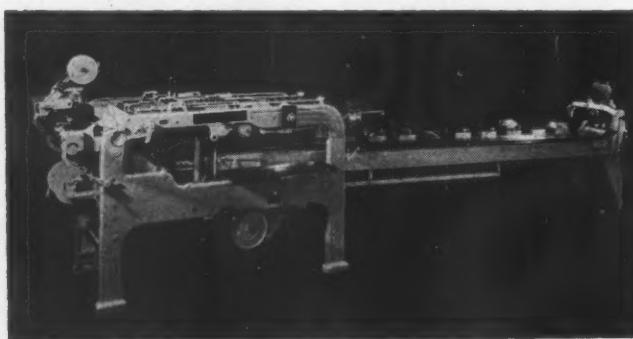
Sherman
PAPER PRODUCTS CORPORATION

Newton Upper Falls 64, Mass.
 Branches in New York, Chicago, Los Angeles

Equipment and Materials

WRAPPING MACHINE FOR FRUITS AND VEGETABLES

The Oliver Machinery Co., Grand Rapids, Mich., announces the adaptation of its wrapping machine to the automatic pre-packaging of fresh vegetables and fruits for sale in self-service refrigerated cases. The produce is placed in cartons, trays, U-boards or on flat cards and is automatically wrapped and heat-sealed in cellophane. Weight, price and date are automatically printed on partially pre-printed, roll-type thermoplastic labels



during the wrapping operation and the proper label is heat-sealed to the package. Cardboard is automatically folded and fed. A 12-ft. in-feed conveyor facilitates the assembly of produce and containers. The current model will handle packages from $3\frac{1}{4}$ in. to $14\frac{3}{4}$ in. long, from $2\frac{3}{4}$ in. to $8\frac{1}{2}$ in. wide, and from $\frac{1}{2}$ in. to $5\frac{1}{4}$ in. high and is adjustable to package size by turning one hand wheel. Other models of the machine are available for different size ranges.

TUBULAR CELLOPHANE FORMS "ALL-SIZE" BAGS

Traver Corp., Chicago, is now marketing cellophane in tubular form which may be fabricated quickly and easily into bags for the protection of military supplies from dust, air, water and moisture-vapor. The material, known as "Tite-Seal," is available in 3-, 4-, 6- and 8-in. widths, under proper priority, and runs 1000 ft. to the reel. Bags may be formed simply by cutting any desired length of the material from the reel and sealing it on both ends. The material, the company states, is acceptable for Methods I, IA and III packaging.

VERSATILE LABELERS

Designed specifically for the food canning industry, the CRC-New Way Labelers developed by Chisholm-Ryder Co., Niagara Falls, N. Y., afford the user equipment that will label many sizes and types of containers at high speed. Built to handle all standard or special metal containers, models are also available for labeling all friction-top or screw-top cans and jars, bottles and jugs with or without handles, paper or fibre containers and practically every type of cylindrical container. The adjustable model handles every type and size of cylindrical can or jar from 13 in. to $6\frac{1}{4}$ in. in diameter by $1\frac{3}{4}$ in. to 9 in. in height. Changes from one size container to another—even from minimum to maximum—can be made in three simple adjustments by means of referring to standard built-in scale on the labeler, as follows: one handle sets the desired diameter, a second sets the proper height and a third sets the glue pot. No tools are necessary to make these adjustments and all handles are easily accessible. No extra parts or attachments are necessary to accomplish the entire range on the adjustable models.

If marking directly on the can is desired, such as the name of

product, in accordance with specified regulations, an accessory attachment is available. Also an attachment for spot labeling is likewise available. These machines incorporate many desirable features, some of which are: application of paste by means of a rubber belt which reduces the cutting and tearing of labels; a patented aligning device which keeps the label centered at all times; enclosed glue pot, equipped with thermostatic heat control.

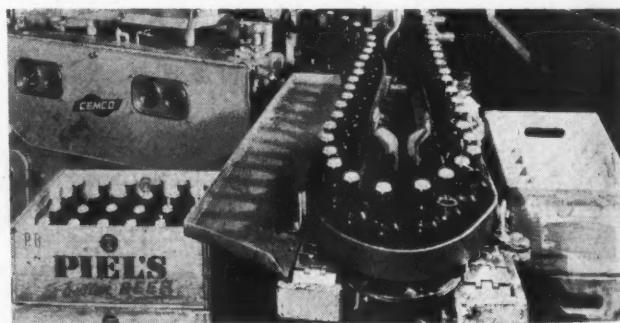
PRESSURE-SENSITIVE LABELS

Simon Adhesive Products Corp., New York, manufacture a pressure-sensitive paper known as "Eze-Stik" which can be made into labels and applied without moistening. It should prove useful in the labeling of production jobs which require removable labels, as the nature of the adhesive is such that when the label is removed it leaves no trace of stickiness, the company claims. They further state this material adheres well to plastic and glass surfaces.

FLAT-TOP CHAIN BELT

Illustrated is one of the installation photographs from the new booklet on Rex Table Top chain belts put out by the manufacturer, the Chain Belt Co., Milwaukee, Wis. These belts offer builders and users of bottling, labeling, sealing and capping machinery an unusually smooth surface that is essentially steady and tip-free.

Construction of these chain belts is simple—a one-piece link and pin. Several important features are: wider bearing on sprocket which means that the entire link absorbs the pulling load; slides freely under blocked containers thus preventing



pile-ups, spillage and breakage in the case of glass containers; smooth surfaces and edges throughout prevent the lodging of foreign matter and bacteria growth inasmuch as there are no pockets which would permit such accumulations; fits conventional tracks.

Copies of the booklet may be obtained by writing for Bulletin No. 464 to the company which is located at 1600 W. Bruce St., Milwaukee 4, Wis.

NOVELTY FLOCKED MATERIALS

Decorative grass-like effects, flocked on both paper and fabric, are now available for packaging and display purposes from Kaplan Textile and Products, Inc., New York. The company claims this material is sunfast and therefore is ideally suited for both carton and box linings and for window displays. A booklet containing swatches of the company's line of spring and summer display materials is now available, on request direct to them, 561 Fifth Ave.

THEY HELP YOU SPEED YOUR WARES TO MARKET

Packomatic Automatic Case Sealers... Case Imprinters... Consecutive Case Numberers Save Space, Labor, Time.

BUILD an efficient packaging department around a PACKOMATIC MODEL D CASE SEALER & COMPRESSION UNIT. Where numerical record of cases is necessary, specify PACKOMATIC'S reliable CONSECUTIVE CASE NUMBERER. Where there is imprinting to be done, rely on PACKOMATIC CASE IMPRINTER.

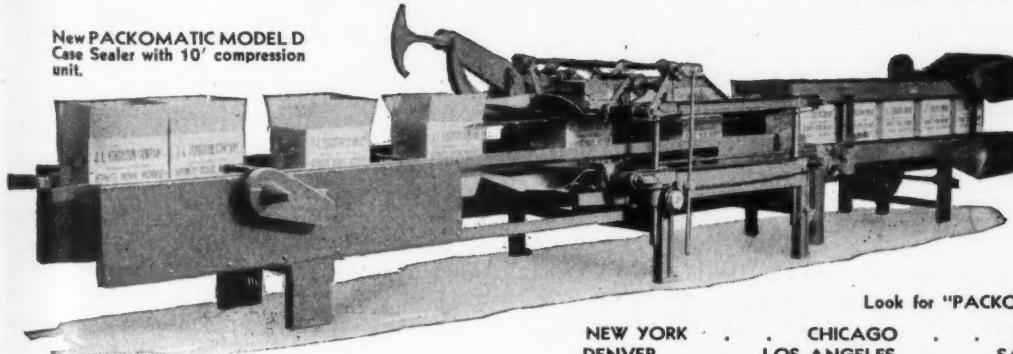
Even if it is only advise and counsel you desire—in regard to present packaging to government specification, or in connection with your postwar product planning—you'll find a convenient PACKOMATIC office manned and equipped to help you. Look for "PACKOMATIC" under "PACKAGING MACHINERY" in your classified telephone directory—or address your inquiry to Joliet. No obligation.

NEW STREAMLINED MODELS AVAILABLE

It's new... improved... streamlined in design, workmanship, and finish—the NEW PACKOMATIC MODEL D SHIPPING CASE SEALER... Furnished for automatic sealing of both tops and bottoms on one machine—or for top-sealing or bottom-sealing only, if desired. Portable or stationary models available... adjustable to a wide variety of case sizes to handle regular corrugated or fiber shipping containers at various speeds.

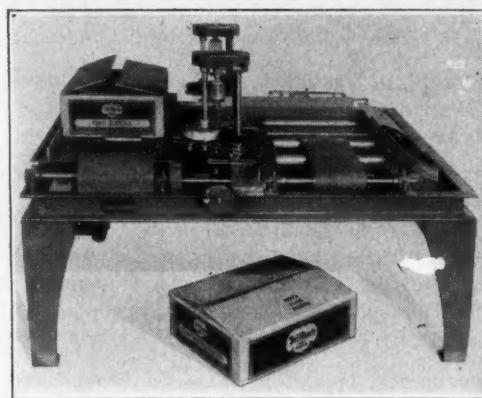
PACKOMATIC
PACKAGING MACHINERY
J.L. FERGUSON CO. JOLIET, ILL.

New PACKOMATIC MODEL D Case Sealer with 10' compression unit.



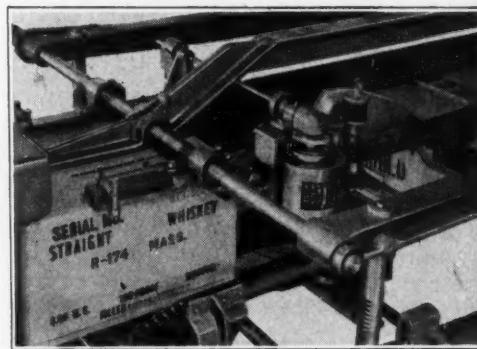
It's new... improved... streamlined in design, workmanship, and finish—the NEW PACKOMATIC MODEL D SHIPPING CASE SEALER.

TYPICAL PACKOMATIC PACKAGING EQUIPMENT
CASE Imprinters, Sealers, Volumetric Fillers, Net Weight Scales.
CARTON Making Machines, Sealers, Dating (Coding Devices), Auger Packers.
PAPER CAN Tube Cutters, Tube Gluers, Shrinkers, Cappers, Setup Conveyors, etc.



PACKOMATIC CASE IMPRINTER

Eliminate inventory of pre-imprinted cases... eliminate manual handling.
Imprints any one or on all four case panels (both side panels; both end panels.) Built to handle packed cases—and generally located at discharge end of compression sealing unit. Imprinting rolls are quickly changeable for both type size and message. Used to imprint contents data, brand name, distributor's name, date packed, coded information, identification, addresses, etc.



PACKOMATIC CONSECUTIVE SERIAL NUMBERER
For imprinting in numbers $\frac{3}{4}$ " high, PACKOMATIC NUMBERER is attached on MODEL D GLUER and operates while case is in motion through gluer. Numberer is actuated by positive control, tripped by case, ink supply is automatic. Device is mounted on case guide rail for automatic adjustment with gluer for case size. Durable, accurate, trouble-free.

Look for "PACKOMATIC" in your Classified Directory

NEW YORK . . . CHICAGO . . . BOSTON . . . CLEVELAND
DENVER . . . LOS ANGELES . . . SAN FRANCISCO . . . SEATTLE

Plants and People



Walker Hamilton

and A. W. Osborn, superintendent of the coating department.

Donald D. Pascal has been appointed manager of the Mid-Western division of National Starch Products, Inc., with his headquarters in Chicago.

Dr. Lucas P. Kyrides, research director of Monsanto Chemical Co.'s organic chemicals division, was presented the first Midwest Award of the American Chemical Society on March 5, in St. Louis. The award, a gold medallion, was given by the Society's St. Louis Section to the individual adjudged most outstanding in the point of "meritorious contribution to the advancement of pure or applied chemistry or chemical education."

Continental Can Co., Inc., has recently announced several changes in personnel. M. M. Dukehart, formerly manager of war products sales, has been appointed manager of meat and dairy products sales. J. P. Morgan, formerly a general line sales representative handling special accounts, is now manager of jobbers can sales and G. E. DuCharme, formerly sales manager of the New York district, is manager of paint and chemical sales.

Continental's recent acquisition of Owens-Illinois Can Co. has also brought about a few changes. J. F. Adams, formerly national accounts manager of Owens-Illinois Can, has been appointed manager of automotive containers sales while F. W. Rosenbauer is now manager of tobacco, proprietary and special container sales. H. P. Thelen, formerly manager of the steel container division of the Owens organization, is now Continental's manager of steel container sales and G. E. Kummerow goes to manager of beer and carbonated beverages cans sales. Hugh Kelleher, formerly war materials division manager, has been appointed manager of the Decoware division and W. Miles Ryan has been appointed assistant to Clay B. Nichols, packers' cans sales manager of the Central division.

The Florida-Georgia general line district sales office of Continental has been moved from Jacksonville to Atlanta with Walter Hitchcock as district sales manager, general line, in charge. Bruce Brandon will stay in Jacksonville as resident salesman.

Albert O. Gruele has been appointed art director of Stokes-Palmer-Dinerman, Cincinnati advertising agency. Mr. Gruele is well known in packaging circles, his designs having won awards in the All-American Package Competition. Previous connections: Art Director and production manager, The American Products Co. and art director, Cincinnati plant of The United States Printing & Lithograph Co.

Paul B. Ramseyer, formerly captain in the Marine Corps, has been appointed technical sales representative for Swift & Co.'s glue division in the New England area.

Owens-Illinois Glass Co. recently announced the redistribution of duties of some principal members of its sales staff. Creation of a sales policy committee was also announced. E. F. Bertrand, now on leave to WPB, is named sales manager to sales divisions

serving the drug industries; R. E. Delaplane, in addition to continuing his duties in closures and plastics, becomes sales manager to the beverage group and E. A. Hildreth is now sales manager to the food divisions. Lucian Taylor has been named assistant general sales manager and H. C. Knepper becomes assistant to the general sales manager. K. J. Solon, formerly with Owens-Illinois Can, is now manager of the sales control division. Jack Thayer takes over as assistant branch manager in New York while H. D. Hopp of the Louisville branch moves to Toledo as manager of the liquor-ware division. H. L. Jackson succeeds him in Louisville and Earl Burns moves into the Indianapolis opening.

Harold L. Tuers, associated with the Hudnut Sales Co., Inc., for the past ten years, recently announced his affiliation with the Blaker Advertising Agency, Inc.

As of March 1, Speed & Co., Inc., is the name of the advertising agency formerly known as Harry B. Green & Co., Inc. The company remains in Baltimore at the same address and the personnel and organization remain the same.

Frank A. Biederman, in charge of advertising and merchandising for Kimberly-Clark Corp., has moved his headquarters from Chicago to Neenah, Wis.

Van Doren, Nowland & Schladermundt, industrial designers of New York and Philadelphia, have announced the appointment of five staff members as associates of the firm. They are: Donald E. Dailey, design director of the Philadelphia office; Lester Geis, architectural and product designer; Charles L. Metzler, product design engineer; Norman H. Prince, director of consumer research; Ladislav Rado, architectural and product designer.



F. P. Winslow

F. P. Winslow, formerly in charge of the Eastern Sales division of Shellmar Products Co. of Mt. Vernon, Ohio, and Pasadena, Calif., has become general manager responsible for manufacturing and sales in 11 Western states. J. H. Gauss, sales manager of the Central division with headquarters in Chicago, takes over, in addition, the sales of the Eastern division. O. D. Carlson will continue as West Coast manager and E. Lukas as superintendent of the Pasadena plant.

Recently elected officials of the Paterson Parchment Paper Co., Bristol, Pa., are: W. C. Leonhard, president; R. T. Anderson, vice-president and general manager; E. R. Leonhard, vice-president in charge of sales; John T. Leonhard, treasurer; Harry Kendall, assistant treasurer; Gilbert Megargee, secretary, and J. R. Dufford, assistant general manager.

The following companies received Army-Navy "E" Awards recently: The Dobeckmun Co., Cleveland Ohio; Continental Can Co., Clearing Ordnance plant in Chicago; the Chickasaw Mills of the Hollingsworth & Whitney Co.

Hugh Hicks, former sales representative in San Francisco for the Marathon Corp., has been appointed sales manager for dairy packaging. Also moving to the Menasha office, as sales manager for cheese packaging, is Walter Dixon, who was Kansas City representative for Marathon. Robert Jeffery moves to the Chicago area from St. Paul-Minn. (Continued on page 180)

Here's good news to make you sing: Texcel's here for packaging!

To modernize your packages
To wrap, protect and seal,
Use Texcel Tape - it's sturdy, neat,
And packed with "sales-appeal".



Except to plants and such, however,
We must make this excuse:
Restrictions still prevent the sale
Of Texcel* for home use.



INDUSTRIAL TAPE CORPORATION

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APRIL • 1945

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For Your Information

Palletization will be an important advantage in air cargo as well as other methods of shipment postwar, Paul Vogt, General Electric packaging engineer, told members of the Industrial Packaging Engineers Assn. of America at their regular meeting Feb. 26 in Chicago. R. F. Weber, IPEAA president, announced the appointment of Neil Fowler, former chief of the Packaging Section of the Office of Chief of Ordnance, to the Association's Executive Committee and as chairman of the Armed Services Committee. Headquarters of IPEAA have been moved to Room 1224, 185 N. Wabash Ave., Chicago.

The American Designers' Institute, at a recent meeting, elected the following officers for 1945: chairman, Belle Kogan; vice-chairman, Robert Gruen; secretary, Ann Franke; and treasurer, Fritz Foord. Members of the executive committee are: Joseph Aronson, George Cushing, Gerald Johnson, Alexander Kostellow, Ben Nash and three new members, namely, Gordon Obrig, Fritz Foord and Robert Thomson.

The semi-annual meeting of the Packaging Machinery Mfgs. Institute, scheduled for April 18, has been postponed by the board of directors in support of the Government directive curtailing conventions.

The Glyco Products Co., Inc., Brooklyn, N. Y., has published a 16-page booklet titled "A High Melting Point Synthetic Wax" which gives detailed information on this type of wax produced by the company under the name of Acrawax C. Properties are listed and indexed and a great many of the specific applications are mentioned in detail. Any chemist or technical worker desiring a copy should write the company and it will be sent free.

The Can Mfgs. Institute is staging an educational campaign to develop knowledge and appreciation of the tin can among high-school and college students. It is expected that 25,000 teachers and 1,000,000 students will be reached by the program. "Home-making Improved and Simplified" is the name of the service which will be issued in a series of four chapters.

The Directors Conference of the National Food Distributors' Assn., which was scheduled for the early part of February, was canceled in cooperation with the wishes of the ODT.

Thomas D 'Addario, designer of packages, labels and displays, has changed his address to 55 W. 42nd St., New York 18.

The Republic Aviation Corp. of Farmingdale, L. I., has inaugurated a method of listing and getting into the hands of all possible users its surplus materials for sale. Two booklets, one called "Company Surplus" the other "Surplus Perishable Tools," list all the materials for which this company has no further use along with size, RAC code, description, part number, and any and all other information necessary to identify the items at a glance. This idea might well be the forerunner for many such booklets by other companies finding themselves with a surplus on hand.

The Fuchs & Lang Mfg. Co., Division of General Printing Ink Corp., has issued a chart approximately 21 in. by 14 in. which is a study of 25 common pressroom difficulties with a description of their possible causes and suggested remedies. This chart, known as "Pressroom Helps," is a modernized revision of the one which first appeared in the Fuchs & Lang House Organ in April 1929. Requests for copies should be addressed to Robert J. Butler, The Fuchs & Lang Mfg. Co., 100 Sixth Ave., New York 13.

The Standard Conveyor Co., North St. Paul, Minn., has recently published an 8-page booklet entitled "Standard Conveyors Do It

Better, Faster, Easier and Cheaper." It covers detailed information with illustrations of gravity roller and wheel conveyors—supports—portable piling machines—horizontal and cleated belt conveyors—and other types of standard equipment. Copies of the booklet will be supplied free to engineers and individuals interested in conveyors to speed up production and reduce manual efforts and costs. Write to the company for booklet No. 60.

S. Curtis & Son, Inc., Sandy Hook, Conn., is celebrating its 100th anniversary this year. A small folder containing a brief history to date of the Curtis family and their part in this business has been published to celebrate the event.

B. R. Newcomb, president and general manager, John Waldron Corp., has been named to serve on the committee on patents of the National Assn. of Manufacturers. The NAM Committee will continue its nation-wide efforts to encourage invention and scientific progress through strengthening and improving the Patent System. Definite legislative recommendations already have been made including one to combat illegal cartels and trusts through recording patent contracts in the patent office.

The Quartermaster Corps has asked the technical committee of Packaging Institute to serve as the Industry Advisory Committee for its Subsistence and Development Laboratory. Charles A. Southwick, Jr., chairman of the technical committee (also Technical Editor MODERN PACKAGING,) reports that the functioning of the committee and method of operation have been agreed upon and that work has already been started on packaging projects submitted by the Quartermaster Corps. The committee consisting of 12 members, has a separate member assigned to cover each particular group of packaging forms or a phase of the packaging industry. Each member has a subcommittee of five other people, selected to broaden the base of the committee work; making a total of 67 in all.

Eli de Vries has been appointed adviser of the Paper Industry Division of the Economic, Financial and Shipping Mission of the Kingdom of the Netherlands with offices at 220 E. 42nd St., New York City. This division is presently engaged in collecting information dealing with all phases of the paper industry to be ready for reconstruction of the paper industry in the Netherlands after the war.

The Chicago Packaging Club was formed recently to bring together and coordinate the many separate factors necessary for proper packaging and shipping. The basic purpose of the club is to bring together at regular meetings producers of packaging materials, packaging designers and engineers, producers of machinery and supplies, users of packaging and packing and other related interests such as railroads, truckers, airlines and other carriers. Although the club has been in existence only a few months, it is reported that it already numbers among its members representatives of most of the leading factors in the packaging and allied fields in the greater Chicago area.

The Folding Paper Box Assn. has conducted its election of territorial and national directors by a mail vote because of the postponement of the annual meeting. The national directors elected are as follows: R. S. Harris, Fort Orange Paper Co.; A. G. Ballenger, Morris Paper Mills; J. J. Brossard, Container Corp.; E. L. Brown, Brown & Bailey Co.; Colin Gardner, The Gardner-Richardson Co.; R. L. Snideman, American Coating Mills, Inc.; W. D. Lynch, National Folding Box Co.; R. A. Ross, Hummel & Downing Co.; P. A. Schilling, Waldorf Paper Products Co.; H. C. Stevenson, Rochester Folding Box Co.

WAS YOUR



GRANDAD AN INDIAN SCOUT



BUFFALO BILL and Wyatt Earp are names familiar to thousands of folks alive today. One a famous Indian scout—the other a famous frontier sheriff. We mention this to show how fast time flies. Today, all the ingenuity and resource of the gigantic Heekin factories are producing for war. Tomorrow, when the war is won, this production will be converted to peace time products . . . colorful lithographed cans of all shapes and sizes. You may not be thinking of improved designing or improved colors on your metal container now . . . but you will be . . . and when that day comes, remember that no finer metal lithography is produced than that produced by the lithographers who work for Heekin. The Heekin Can Co., Cin'ti, O.

HEEKIN
Lithographed
CANS
WITH HARMONIZED COLORS



U. S. patent digest

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at ten cents each in currency, money order or certified check; postage stamps are not accepted.

Wrapping Machine, W. B. Ranney (to Wm. Wrigley, Jr., Co., Chicago, Ill.). U. S. 2,370,072, Feb. 20. In a wrapping machine, a tumble box having article receiving pocket therein, a nipper carried by the tumbling box and having an article engaging portion extending into said pocket, means for delivering an article to said pocket, and means for withdrawing nipper from said pocket.

Bag and Method of Making Same, D. Schmidt (to The Dobeckmun Co., Cleveland, Ohio). U. S. 2,370,079, Feb. 20. The method of forming an easily opened bag comprising the steps of laminating to the inner surface of a web a tear strip extending transversely of said web to a lateral edge of said web.

Key for Opening Cans, H. Sebell, Marblehead, Mass. U. S. 2,370,081, Feb. 20. A key for opening cans provided with a tear strip.

Container, T. Begg (to American Can Co., New York, N. Y.). U. S. 2,370,132, Feb. 27. A sheet metal can body having a soldered seam, comprising two reversely bent interengaged hoods forming a plurality of laterate layers of metal having spaces therebetween.

Filling and Measuring Apparatus, A. Rambold, Dresden, Germany (vested in the Alien Property Custodian). U. S. 2,370,191, Feb. 27. A weighing device having a scale beam, a scale dish pivoted on the beam, a variable volume measuring box through which material to be weighed is transmitted to said dish.

Bag Construction, W. S. Brede, M. M. Curtis and J. L. Reibold (to Brede, Inc., Minneapolis, Minn.). U. S. 2,370,226, Feb. 27. A method of forming wrapping devices from sheet material which includes forming side and top sections, preparing end sheets, each of which is formed with a substantially straight side edge and an opposite side edge diverging outwardly toward the ends of said end sheet.

Topping Machine for Canning, L. E. Davies (to White Cap Co., Chicago, Ill.). U. S. 2,370,292, Feb. 27. In a topping machine for use in canning, a pressing plunger comprising a rigid post, a presser head movably mounted on the post and adapted to enter the mouth of a receptacle disposed in coaxial alignment therewith.

Pigmented Coating Compositions, H. E. Woodward (to E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.). U. S. 2,370,341, Feb. 27. A pigmented protective coating comprising a non-volatile film forming vehicle and a pigment which is the product of coupling the diazo of 6-chloro-2-amino-toluene with the anilide of 2-hydroxy-3-naphthoic acid.

Shipping Bundle for Rail Anchors, F. A. Preston (to Poor & Co., Chicago, Ill.).

U. S. 2,370,417, Feb. 27. A rail anchor bundle comprising a wood frame member formed near its middle with an opening defining one edge of a hand grip, a group of rail anchors arranged on the frame member at opposite sides of the said opening and in balanced relation to each other.

Wrapping Machine, W. B. Ranney (to Wm. Wrigley, Jr., Co., Chicago, Ill.). U. S. 2,370,418, Feb. 27. A wrapping machine of a type wherein individual wrappers and articles are timed to be delivered together to a wrapping station.

Gasproof Container, D. Ray, Beverly Hills, Calif. U. S. 2,370,419, Feb. 27. A non-metallic, light-weight container for foodstuffs, medical supplies, emergency rations and similar articles, adapted to resist contamination of its contents by poison gases; said container being flexible and stretchable and having a heat-sealing inner surface portion, a thin layer of polyvinyl alcohol composition, and an outer layer of a synthetic linear polyamide.

Index Tab and Supporting Strip, W. E. Figuccio, Louisville, Ky. U. S. 2,370,527, Feb. 27. A means for supporting index tabs, a tab of the type comprising a section of flat material bearing an index character upon one of its faces, a strip of cellophane folded over the front and back faces and adhesively secured thereto.

Package Filling Machine, R. R. Walton (one-half to Container Corp. of America and one-half to Dewey & Almy Chemical Co.). U. S. 2,368,624, Feb. 6. Apparatus for evacuating flexible containers comprising an evacuating nozzle, a hollow ring surrounding the nozzle, connected thereto and having a plurality of openings through its outer wall and a pneumatic connection between the bore of the ring and the bore of the nozzle.

Liquid Sealing Method, O. J. DeSylva (to Shellmar Products Co., Mount Vernon, Ohio). U. S. 2,368,645, Feb. 6. A method of fabricating containers, which comprises stacking pairs of blanks of rubber hydrochloride material with each of said pairs being separated by a sheet of non-fusible material, die-cutting a plurality of pairs of said blanks to any desired contour, placing said under compression after dusting exposed areas with inert powder and placing same in bath of molten metal to fuse desired marginal areas.

Package for Radio Tubes and the Like, C. I. Elliot, V. R. Pantalone (to Box Blank Corp. of New York and Radio Corp. of America). U. S. 2,368,753, Feb. 6. A strip of paperboard material adapted to form a clip for supporting a radio tube.

Container Sealing Device, C. C. Grotnes, Park Ridge, Ill. U. S. 2,368,758, Feb. 6. A sealing device comprising in combination a split ring, a laterally flexible metal strap spanning the gap between the ring ends and fixed rigidly at one end to an end portion of the ring and means for drawing

strap endwise toward other end of the ring.

Package, C. O. Bailar (to Marathon Corp. of Wis.). U. S. 2,368,797, Feb. 6. A tray for supporting articles formed of an elongated integral blank, the ends of said blank being partially overlapped and fastened together to form a rectangular band.

Carton, A. Molet, Chicago, Ill. U. S. 2,368,864, Feb. 6. A carton blank comprising a number of wall portions, flap portions hingedly secured to opposed edges of each of said wall portions, and a pouring spout and closure blank portion comprising an intermediate flap portion having hingedly secured thereto wing portions shaped to the configuration of a quadrant of a circle.

Paper Article and Method of Forming It, C. W. Goodwin (to American Seal-Kap Corp., Wilmington, Del.). U. S. 2,368,920, Feb. 6. An open top paper cup having a body portion of flexible material and having an integral annular outer bead at its top, of a pre-formed snap-on cover.

Vanity Case, L. Esterow, New York, N. Y. U. S. 2,368,918, Feb. 6. A vanity case having body portion, a hinged cover thereto, the cover having a relatively non-flexing closure strip rigidly attached to and projecting forwardly from its front wall.

Fluid Dispenser, J. E. Parkhurst, San Diego, Calif. U. S. 2,368,944, Feb. 6. In a fluid dispenser, the combination of a tube, the base of said tube having the lower ends of its walls secured together in three folded portions radiating from the center thereof and means cooperating with said folded portions causing the same to collapse upon manual pressure, and closure means for the discharge end of the tube.

Lipstick Holder, A. Mitchell (to The Risdon Manufacturing Co., Naugatuck, Conn.). U. S. 2,368,997, Feb. 6. A lipstick holder having relatively movable concentric tubes and a contained lipstick elevator, one of said tubes being contractile, with constrictor member slideable thereon and forming a ring clutch with said tube, and equipped with thumb-piece attached to said tube by means of such clutch.

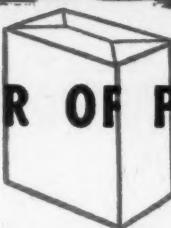
Container and Method of Making the Same, H. E. Braloff, Rockville Center, N. Y. U. S. 2,369,012, Feb. 6. A container comprising a fibre body formed of inner and outer tubular sections, inner section embodying a coextensive surface of material impervious to moisture embedded therein.

Container and Method of Making the Same, H. E. Braloff, Rockville Center, N. Y. U. S. 2,369,013, Feb. 6. A container comprising an outer casing including a tubular shell and end-forming members entered in said shell in frictional engagement therewith, with inner product-receiving receptacle of flexible material resilient means adhesively surround said inner receptacle to form an inner wall therefor.

Wave-Set Envelope, E. C. Lindeed (to Baltimore Paper Co., Kansas City, Mo.). U. S. 2,369,060, Feb. 6. A wave-set envelope containing a powdery wave-setting chemical including a layer of sub-

WHAT IS THE ORIGINAL MOISTURE OF YOUR PRODUCT? INDEX OF FAILURE

What SAFETY FACTOR OF PROTECTION is Required?



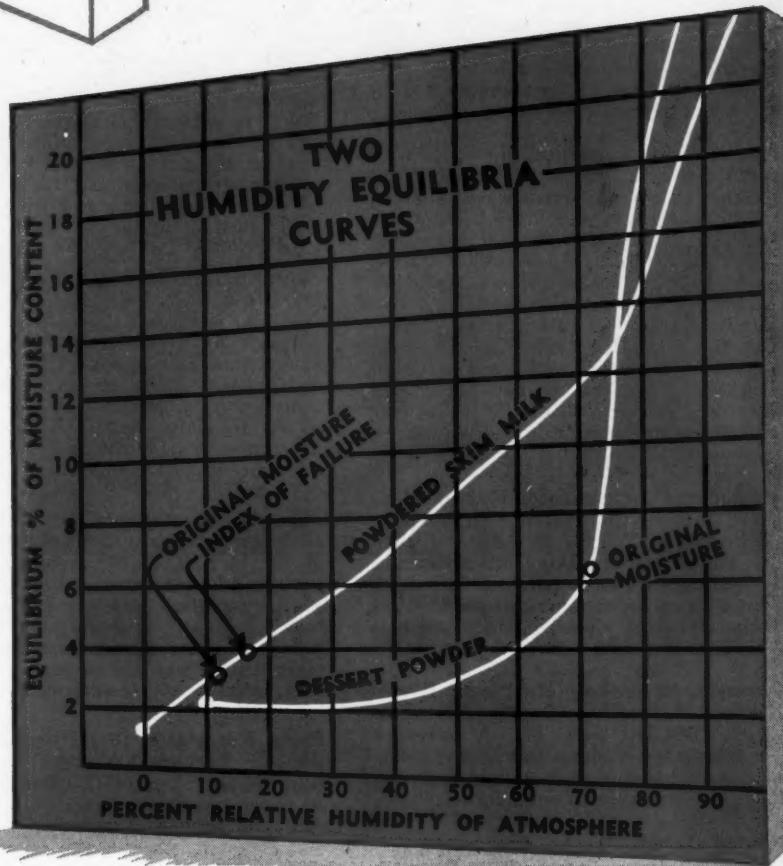
THE HUMIDITY EQUILIBRIA "curve" represents the specific amounts of moisture any food product will absorb at a sliding scale of increasing humidities. "Equilibrium" is the balance point between substance and atmosphere at which further exposure will show no additional moisture gain or loss.

ORIGINAL MOISTURE is the controlled moisture content of a food product at the time of packaging.

INDEX OF FAILURE is a point which represents the amount of moisture content (or lack of moisture) which will cause a product to spoil — or to become unfit for commercial marketing.

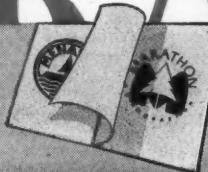
SAFETY FACTOR OF PROTECTION is the degree of moisture-resisting package protection, based on the curve of Humidity Equilibria, necessary to deliver a product to the consumer with its original quality intact.

The determination of these factors is a part of the thorough procedure used by Marathon technicians to establish the protective requirements of your food package. Application of Humidity Equilibria studies to packaging problems is another example of Marathon pioneering. By referring to an extensive file of data on a wide variety of products, Marathon technicians can make packaging recommendations based on successful packaging of products with similar equilibria curves. Food processors who are interested in a more complete treatise on this subject will find it thoroughly covered in "The Application of Humidity Equilibria to Package Engineering" by W. H. Graebner of the Marathon Technical Department.



The above graph shows two Humidity Equilibria curves — one for Powdered Skim Milk, a product with high moisture-absorbing properties, and the other, a starch-type Dessert Powder which does not become really "thirsty" until around 60% relative humidity. This information enables the package engineer to conclude that the Powdered Skim Milk needs a package providing a high Safety Factor of Protection for all degrees of humidity and that the Dessert Powder also requires protection to meet unusual conditions of high humidity.

MARATHON



The trade name "Menasha" has been changed to "Marathon." There is no change, however, in sales policies or personnel which will continue to pace the field in package development.

MARATHON CORPORATION

MENASHA, WISCONSIN

Formerly The Menasha Products Co.

stantially absorbent material impervious to said powdery chemical.

Shipping Container, F. O. Wright, Memphis, Tenn. U. S. 2,369,099, Feb. 6. In a barrel structure, a flaring wall being longitudinally slotted at one end to provide a multiplicity of finger extensions, each finger extension being provided with a pair of longitudinally spaced abutments thereon.

Container, E. O. Then (to American Can Co., New York, N. Y.). U. S. 2,369,188, Feb. 13. A sealed metallic container, comprising a tubular body having a longitudinal side seam having an integral folded double wall body extension at its upper end and on the outside.

Jacket Forming Machine, J. Balton (to Maryland Baking Co., Inc., Baltimore, Md.). U. S. 2,369,205, Feb. 13. In a jacket forming, a continuously movable endless conveyor; at least one unit mounted on said conveyor to travel past a loading station, a glue-applying station and a jacket-discharge station.

Hinged Cover Container, H. A. Carruth and Marshall I. Williamson (to National Folding Box Co., New Haven, Conn.). U. S. 2,369,385, 2,369,386, 2,369,387, 2,369,388, 2,369,389, 2,369,390, 2,369,391, 2,369,392, Feb. 13. An improved hinged cover container formed from a single blank of paperboard material comprising a box part having a front wall panel and a rear wall panel connected at the lower ends thereof to a bottom wall panel, overlapping side wall forming flaps extending from the side edges of said front and rear wall panels providing side wall panels for the box part.

Method and Apparatus for Making Film, G. F. Nadeau (to Eastman Kodak Co., Rochester, N. Y.). U. S. 2,369,484, Feb. 13. The process of making film or sheeting by feeding a flowable cellulose derivative solution from a container provided with a discharge orifice through which solution flows onto a casting surface.

Conveyor for Filling Machines, R. D. Delamere, Toronto, Ontario, Canada. U. S. 2,369,540, Feb. 13. A conveyor comprising of a reciprocable frame, rotatable members journaled on said frame in spaced relationship to one another.

Printed Label, D. L. Francescon (to Columbian Bank Note Co., a corp. of Illinois). U. S. 2,369,549, Feb. 13. A printed label comprising: a paper sheet having one side coated with pigment, ink-printing over one area of said pigment, a transparent varnish coating over said printing and exposed pigment, coating of soluble transparent adhesive over said varnish, and ink-printing on a second area of the label over part of said adhesive, the adhesive face of said label being applicable to a glass panel.

Bottle Conveyer, F. Gettelman, Milwaukee, Wis. U. S. 2,369,557, Feb. 13. The combination with a bottle conveyer having substantially rigid bottle supports adapted for free lateral release of glass fragments, of a glass receiver laterally adjacent to the conveyer at one side thereof and a resiliently yieldable glass ejecting arm mounted at the opposite side.

Method and Apparatus for Filling Envelopes, D. S. Gustin & D. Mullan (to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.). U. S. 2,369,563, Feb. 13.

The method of filling the envelope of an electric energy translation device with a gas at a preselected definite pressure comprising filling the envelope with gas from a source of supply and at a pressure somewhat in excess of the desired preselected pressure.

Bag Closure, P. S. Coghill (to E. I. du Pont de Nemours & Co. Inc.). U. S. 2,369,716, Feb. 20. The process of closing bags of heat-sealable material in such a way that a tube for dispensing the contents is formed in the mouth thereof, which comprises folding a blank into at least two superimposed layers, and partly inserting the folding blank in the mouth of the bag, and heat sealing a strip or zone extending across the mouth.

Method of Packaging Sliced Loaves, G. C. Papendick (to, by mesne assignments, Elizabeth Papendick, University City, Mo.). U. S. 2,369,753, Feb. 20. The method of packaging a baked bread loaf which comprises slicing the loaf, subdividing the loaf into two separate fractions, progressing one fraction along a straight line path, progressing the second fraction along a laterally divergent path, wrapping separately, and then alignment in end-to-end forming alignment with each other for unitary package.

Apparatus for Sealing Containers, R. J. Stewart & L. F. Pahl (to Crown Cork & Seal Co., Baltimore, Md.). U. S. 2,369,762, Feb. 20. In an apparatus for vacuumizing containers, a tunnel open at both ends, means to continuously move containers through the tunnel, steam supply means to maintain a steam atmosphere in the tunnel, cap feeding means having a delivery end in the funnel.

Paper-Coating Composition and Method of Making Same, G. Witty, New York, N. Y. U. S. 2,369,766, Feb. 20. A composition adapted for use in forming a paper coating solution consisting of milk albumin, potato starch, kaolin, borax, sodium stannate, nitrobenzene, glucose and scrap leather solution composed of water, urea, ethylene glycol and phenol.

Paper Receptacle, S. H. Berch (to The Flexible Vacuum Container Corp., Los Angeles, Calif.). U. S. 2,369,654, Feb. 20. A paper receptacle comprising an inner container formed of a single sheet of pliable material substantially impervious to air, moisture and oils or grease and folded to form two similar side portions and sealed at the marginal edges thereof.

Match Book Cover, L. R. DeLauder, Bartow, Fla. U. S. 2,369,884, Feb. 20. A match book holder comprising a substantially T-shaped blank of cardboard having a centrally positioned window in the head part with a match book positioned over the window through which window the heads and a major portion of the match stems are exposed.

Closure Construction for Metallic Containers, W. I. Hanrahan (to U. S. Steel Products Co., Los Angeles, Calif.). U. S. 2,369,895, Feb. 20. A closure for metallic containers comprising an internally threaded bushing member seated in the wall of the container and a plug member having a screw threaded engagement therewith.

Towel Dispenser, L. L. Price & M. E. Maltby (to Philip A. Wooster). U. S.

2,369,851, Feb. 20. In a towel dispenser, rotary means adapted to rotate as the toweling is dispensed, means for arresting rotation of the rotary means when a predetermined length of toweling is dispensed.

Container Lifter, A. S. Krueger (to Marathon Corp., Rothschild, Wis.). U. S. 2,369,902, Feb. 20. A lifting device comprising a jaw member, a handle bar integral with said jaw member, a second jaw member pivoted to said handle bar, a finger grip integral with said pivoted jaw member and extending beneath said handle bar, and a spring leaf interposed between one end of said handle bar and one end of said finger grip bar for normally urging said finger grip bar into inoperative position.

Fuel Container, L. Shakesby (to Imperial Chemical Industries, Ltd., a corp. of Great Britain). U. S. 2,369,921, Feb. 20. A flexible fuel container having walls formed of flexible non-metallic sheet material impervious to liquid fuel and provided with at least one continuous flange-like portion of flexible material.

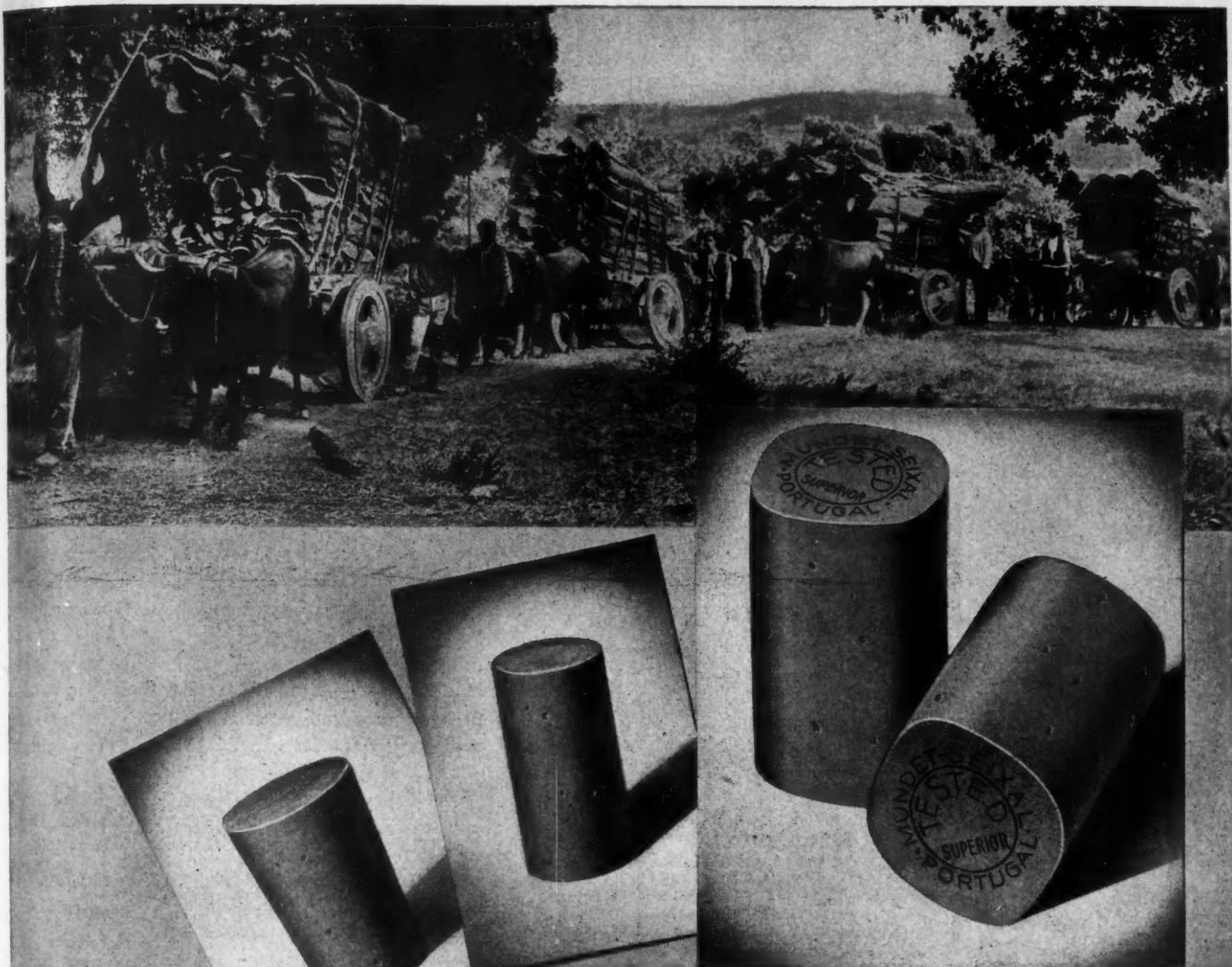
Fibre Container, F. J. O'Brien (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,369,975, Feb. 20. A fibre container comprising a cylindrical body, a liner therefor, a sealing disk extending across the open end of said body portion for closing the same.

Holder for Toothbrush and Dentifrice, C. F. Brown, Kansas City, Mo. U. S. 2,370,005, Feb. 20. A holder for a toothbrush and a dentifrice comprising a barrel divided longitudinally to form a toothbrush handle receiving compartment; a closure for said dentifrice receiving compartment; and an elongated resilient member attached to said closure and having one end thereof formed and positioned to resiliently engage the wall of said barrel to secure the closure in the closed position.

Container & Closure Therefore, P. V. DiCosmo (to The Canister Co., Phillipsburg, N. J.). U. S. 2,370,018, Feb. 20. A container having a body presenting an inner surface of normal predetermined contour and a closure member located within said body and having an edge thereof which differs from that of said normal predetermined contour but merges gradually therewith leaving a relatively long narrow venting space between the edge of the closure member and the inner surface of the container body.

Rubber Adhesive, K. L. Keen & E. G. Bargmeyer (to Mishawaka Rubber & Woolen Mfg. Co.). U. S. 2,370,044, Feb. 20. A quick-setting tacky cement comprising purified latex, a curing agent, a sensitizing agent, and a volatile stabilizer, the sensitizing agent being ammonium nitrate and the stabilizer being dimethylamine.

Paper Coating Composition, C. W. Stewart (to Corn Products Refining Co., New York, N. Y.). U. S. 2,370,268, Feb. 27. Composition of matter suitable for coating paper comprising the following substances: zein, sulfonated oil, potassium rosin size, sodium hydroxide, water, china clay, gelatinized tapioca starch.



MILLIONS OF AIR CELLS TO SEAL ONE BOTTLE...

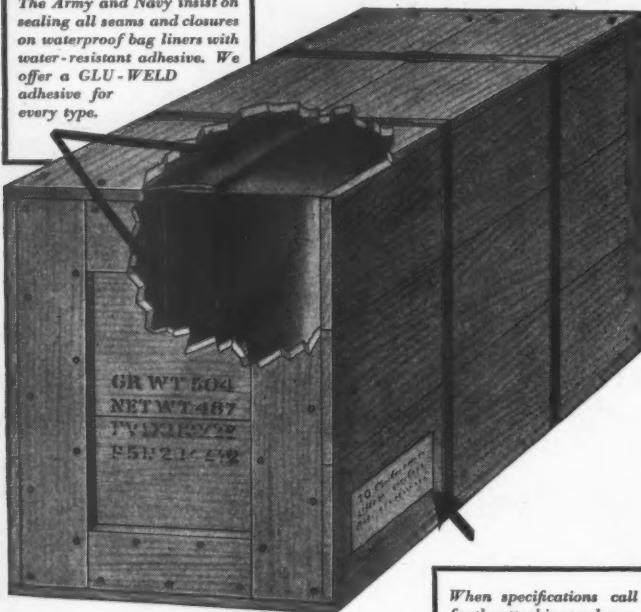
There are actually millions of microscopic cells in one Mundet Cork Closure. These tiny walled chambers, each holding entrapped air, form the remarkable structure that makes Cork so resilient and liquid-tight. It's the reason why Cork of the proper grade and quality, expertly machined and sized, gives complete and lasting protection to bottled products.

Cork—fine sealing with Cork—has been Mundet's specialty for 80 years. From harvesting of the raw Cork in warm Mediterranean lands, to manufacture and final inspection of the Cork Closures in the Mundet plant, every precaution is taken to give your products supreme sealing protection. Mundet Cork Closures are clean, properly graded, and precision-sized. They are made in many types for specific requirements. For other information, write to Mundet Cork Corporation, Closure Division, 65 South Eleventh Street, Brooklyn 11, N. Y.

MUNDET — CLOSURES —

WHAT IS THE CORRECT PACKAGE FOR OVERSEAS SHIPMENT?

The Army and Navy insist on sealing all seams and closures on waterproof bag liners with water-resistant adhesive. We offer a GLU-WELD adhesive for every type.



OUR DEFINITION

When specifications call for the attaching and over-coating of labels on wood, fibreboard or lacquered tin with a waterproof lacquer we recommend our C-815 GLU-SHIELD.

A package which is correct for overseas shipment of war materiel is one to which has been applied principles of common sense; one which, in all possible cases, exceeds rather than shades the requirements of the specifications involved; one in which equal attention has been given to exterior and interior containers, blocking and bracing, corrosion prevention, and permanent marking; one in which a shipper takes pride in his assurance that despite rough handling, outdoor storage at the ends of the earth and transportation of all types, his product will be READY FOR WAR.

GLU-WELD WATER RESISTANT ADHESIVES—TRANSPARENT FILM ADHESIVES

UNION PASTE COMPANY
Quality Adhesives Since 1866

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UPACO

CASE, BAG AND CARTON SEALING GLUES — LABELLING ADHESIVES

GLU-WELD AND GLU-SHIELD AVAILABLE
IN THE MIDWEST FROM
THE F. G. FINDLEY CO., MILWAUKEE, WIS.

Impact . . .

(Continued from page 139) of water vapor absorbed during the test.

The effects of abuse on the efficiencies of the various wrapping and dipping materials are shown in the accompanying graph (Fig. 3). The accompanying photographs (Fig. 1) show the results of low-temperature impact tests on the impairment of the various coverings.

Discussion

In planning the impact tests an effort was made to anticipate the extent of abuse to which a unit package of compressed dehydrated food might be subjected during extreme conditions of handling, shipping and distribution. Similar physical abuse under tropical conditions would not cause greater impairment of the coatings and overwraps, since all materials included in this study were more durable at 70 deg. F. than at 0 deg. F.

The reference to Fig. 1 permits comparison of the packages before and after the tests. The extent of the destruction of the coverings was found to be proportional to the impairment of the efficiencies.

Both the single and laminated cellophane overwraps were subject to some splitting as the result of the drop tests at 0 deg. F. All of the sheet materials withstood the impact tests at 70 deg. F., with only minor impairments such as the opening of the heat-sealed end folds. This was particularly evident in the case of the waxed-paper overwraps. The laminated waxed paper was found to be the most durable of the overwraps.

Three of the commercial coatings were badly shattered by the drop tests at 0 deg. F., resulting in marked losses of efficiency. Coating D (microcrystalline paraffin) withstood the impact tests effectively at 0 deg. F., thus indicating the relatively greater elasticity of this coating at low temperatures.

Conclusions

The results of the tests may be summarized as follows:

1. Commercial paraffin-base coatings were more nearly impervious to moisture vapor before subjection to impact tests than any of four commonly employed heat-sealing overwrapping materials.
2. Standardized impact test at 70 deg. F. caused greater impairment of the sheet-material overwraps than of the dip-coatings.
3. The efficiencies of both the overwraps and the commercial dip coatings (except coating D) were seriously impaired by impact tests at 0 deg. F.

Acknowledgments

The authors acknowledge the suggestions of Dr. W. D. Ramage of this laboratory in connection with the work. The assistance given by Miss Evelyn Thompson in carrying out the routine tests is appreciated.

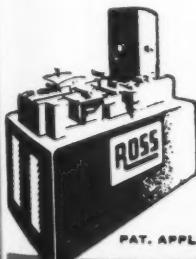
Literature cited

- ¹ C. A. Plaskett, *Principles of Box and Crate Construction*, U. S. Department of Agriculture Technical Bulletin No. 171, p. 83, April, 1930.
- ² J. R. Sanborn and G. J. Hucker, *Packaging Requirements for Dehydrated Vegetables*, Paper Trade J., TAPPI Section, 116 (17): 185, April 29, 1943.
- ³ A. L. Pitman, W. Rabak, and H. Yee, *Packaging Requirements for Dehydrated Vegetables*, Food Indus., 15 (1): 49, Jan., 1943.
- ⁴ B. Makower and G. L. Dehority, *Equilibrium Moisture Content of Dehydrated Vegetables*, Ind. Eng. Chem., 35: 193, Feb., 1943.



Has everything Does everything

The new ROSS automatic and semi-automatic packaging machines will be versatile, designed to solve quickly and easily, your packaging problems. Featuring standardized, high precision parts made to close tolerances — no oiling, all moving parts self-oiled, repairs on ROSS machines will be practically non-existent. With speedy, versatile adjustability thru precision dial controls, ROSS automatic and semi-automatic machines have Master Speedrangers, giving speeds from 40 to 120 a minute or greater. Look for ROSS for assistance in your packaging problems. Write for complete information today.



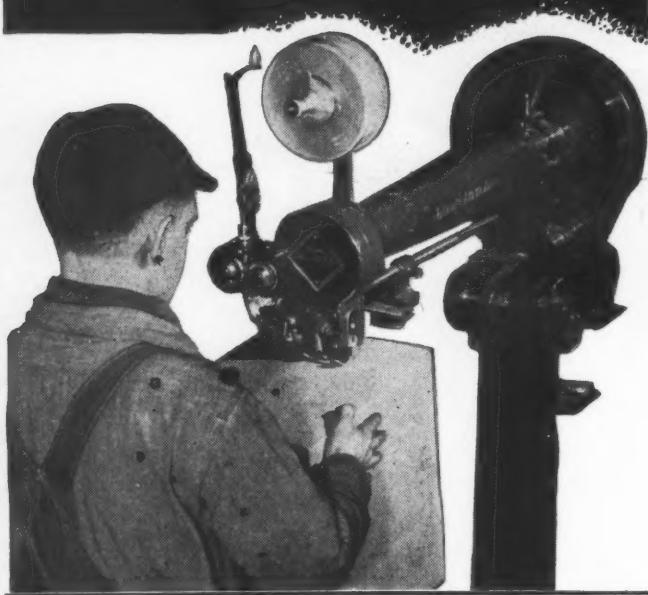
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Co. LUDLOW • KENTUCKY

PACKAGING MACHINERY

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MEANS PRODUCT PROTECTION AND LABOR SAVING



*Silverstitching . . . Acme's method of closing cartons . . . is your best assurance that cartons will stay closed under all conditions of handling, storing and shipping.

Silverstitching means forming, driving and clinching steel staples through any type of boxboard. It is done on a simple, low-cost machine . . . the *Silverstitcher* . . . on bottoms, tops and flaps . . . in a simple, labor-saving operation.

Silverstitching is practical and economical whether you have one packing line or many. For complete details about the advantages of Silverstitching cartons, write for informative, illustrated folder today.

ACME STEEL COMPANY
2843 ARCHER AVE., CHICAGO 8, ILLINOIS
Branches and Sales Offices in Principal Cities

Molded plastics bottles . . .

(Continued from page 108) of considerable help in maintaining accuracy of register in production runs.

The enamel decoration on the finished package has a slightly glossy appearance and a slightly raised surface, giving an embossed effect. It is said to stay perfectly clean and bright through all the hard knocks of ordinary shipment and use, and it adheres to the surface quite as permanently as though it had been molded there.

One note of caution is necessary for those packagers who would take a leaf from John Hudson Moore's book. Under present restrictions polystyrene is by no means in plentiful supply and it is not generally being allocated for such non-essentials as cosmetics. Occasionally, the enterprising molder may be able to pick up small lots of polystyrene for such use. But the packager who adopts a polystyrene bottle at this stage must be prepared for interruptions of supply and must be ready to fill in with a substitute whenever it becomes necessary to do so.

The Moore Co., with a hand-filling operation, remains flexible and can shift readily from plastic to glass and back again. Because of similarity of appearance of the two containers, no disturbance to the market will result if these shifts become necessary.

CREDITS: Bottles injection molded by Prolon Plastics, division of Pro-phy-lac-tic Brush Co., Florence, Mass. Sikk-screen printing, Creative Printmakers Group, New York. Wood closures, Gibson-Jones Co., Inc., New York.

Florida fruits . . .

(Continued from page 119) have been discarded and standard-size glass jars in 1- and 3-lb. sizes are used for everything. J. H. McCready, president of the company, says that he will not return to fancy shapes after the war, because standard size jars are more economical and convenient for packing and shipping. The Chez François labels are so distinctive and easily read that odd-shaped containers are not needed to command attention. Furthermore, while women like fancy containers for perfumes and cosmetics, they prefer standard food jars for pantry shelves and for their obvious re-use value.

Chez François products have gone to millions of service men both in this country and overseas. Last year the Army Quartermaster Corps bought 50,000 dozen 2-lb. jars of orange marmalade for use in camps and post exchanges in this country . . . 1,200,000 lbs. of marmalade. Large quantities were also bought by the Navy. Individual gift baskets and boxes went to thousands of men serving on the battlefields all over the world from friends and relatives in this country.

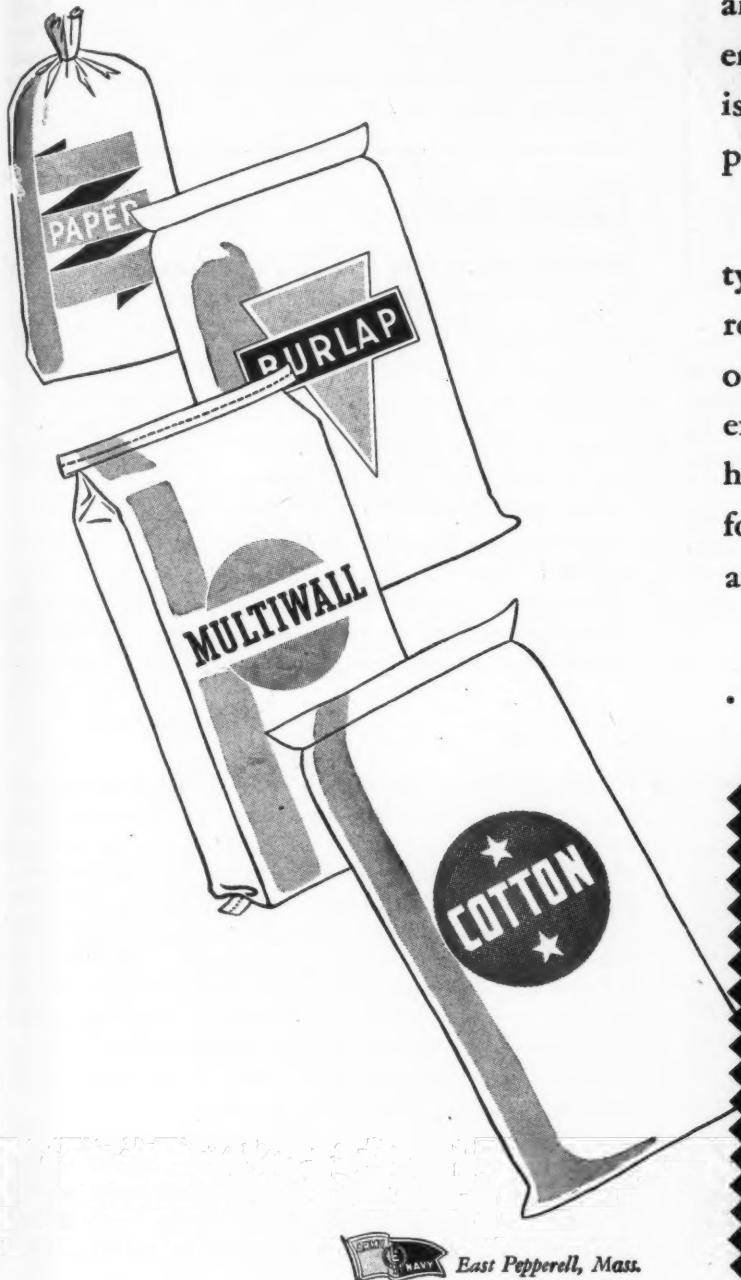
The efficiency of Chez François packaging is proved by the many letters the company has received from satisfied customers telling of the good condition in which the gifts arrived at their destinations.

CREDITS: Baskets, Peerless Mfg. Co., Miami, Fla. Boxes, Better Box Co., Miami. Labels, Miami Post Publishing Co. Four-color labels, Schmidt Lithographing Co., San Francisco, Calif. Gold labels, Cameo Die & Label Co., New York. Jars and metal caps, Hazel-Atlas Glass Co., Wheeling, W. Va. Cellophane, Sylvania Industrial Corp., New York.



Whatever's the **BEST BAG FOR YOUR USE**

...we make it!



East Pepperell, Mass.

WHEN you buy your bags from Bemis, among the important advantages you enjoy is this: You can buy whatever type is best for your particular use—cotton, paper, multiwall, burlap or waterproof.

Bemis is a leading producer of *all* types of bags and consequently has no reason to high-pressure you toward any one type. We have no favorites. If our experienced packaging specialists can help you to determine which is the best for your use, you may be sure that their analysis and advice will be unbiased.

Whatever's the *best bag for your use*
...we make it.

BEMIS BAGS

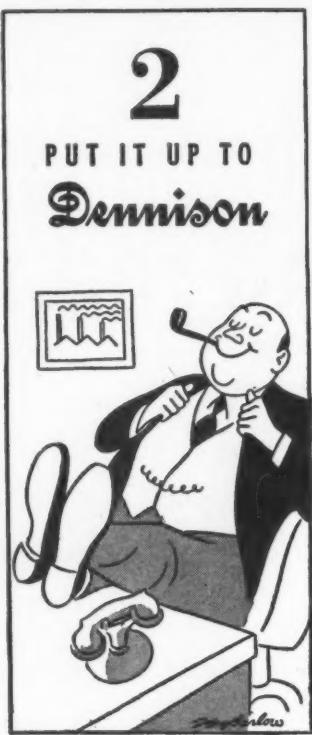
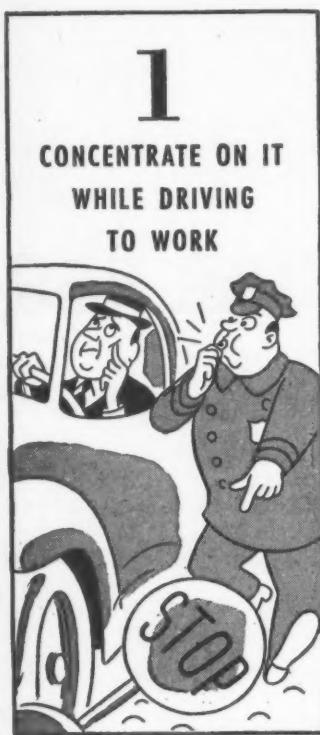


BEMIS BRO. BAG CO.

OFFICES • Baltimore • Boston • Brooklyn • Buffalo • Charlotte
Chicago • Denver • Detroit • East Pepperell • Houston • Indianapolis
Kansas City • Los Angeles • Louisville • Memphis • Minneapolis
Mobile • New Orleans • New York City • Norfolk • Oklahoma City
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Seattle • Wichita • Wilmington, Calif.

BETTER BAGS SINCE 1858

Two Ways to Solve Your Product Marking Problem



Right now you're up to your ears in war production. But you probably are still *thinking* about a new product to be made when peace comes. You're also probably thinking about marketing that product . . . how to trademark it, package it or how to get your story across at the point of sale, among other things.

That's where Dennison comes in. Whatever your marking problem, remember there's more than a century of specialized experience at your beck and call here in Framingham. So when the time comes, put your problems up to

Dennison

PAPER PRODUCTS FOR MORE THAN A CENTURY



We'll be glad to help you plan today the special tags or labels that can be manufactured tomorrow. Present production at Dennison is given over to war work, but development work with the leaders of American industry still goes on. Evidences of past performances are given in an interesting booklet on product marking and identification. Get the coupon that will bring yours to you in the mail today.

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Dennison Manufacturing Company, 227 Ford Ave., Framingham, Mass.
Please send me without obligation, booklet "If You Could Only Be at Every Point of Sale."

Name
Firm
Street and Number
City Zone State

Supermarket technique . . .

(Continued from page 117) "Betty Crocker," whom the company states is known to 90% of American housewives, and voted their favorite home economist, is also featured. The back panel describes new speed methods for making cakes and the side panels contain cake recipes.

Betty Crocker soup mixes have also been simplified to give more emphasis to the name Betty Crocker. Backgrounds are yellow with the product name band in different colors for quick identity of different soups.

General mills whole packaging program is one that is being approached with sound reasoning and with significant attention to the economic trends in tomorrow's self-service merchandising.

CREDITS: Bisquick packages, designed by William C. Schneider, art director, Knox Reeves, Minneapolis; food paintings by Harry Maust; assembly and working drawings, Bureau of Engraving, Minneapolis; package planning by Wayne Hunt, Knox Reeves; testing by Dr. A. R. Root of Knox Reeves. Betty Crocker soup mix, designed by Harry H. Farrel, Chicago; cartons by Waldorf Paper Products Co., St. Paul, and Container Corp., Chicago. Softasilk label, designed by Dancer-Fitzgerald-Sample, printed by Bureau of Engraving, Minneapolis.

Questions and answers

(Continued from page 142) previous tests have shown that the transmission value for the individual sheets is 0.3 gram.

$$\frac{1}{C} + \frac{1}{C_1} = \frac{1}{C_2}$$

$$\frac{1}{0.3} + \frac{1}{0.3} = \frac{2}{0.3} = \frac{1}{C_2}$$

$C_2 = 0.17$ gram for the 2 layers of cellophane

Another example, using dissimilar materials, would be the combined value for a printed triple-laminated glassine and a moistureproof cellophane, assuming the transmission of the triple ply sheet to be 0.1 of a gram and the moistureproof cellophane, of the particular grade selected, to be 0.4 of a gram.

$$\frac{1}{0.1} + \frac{1}{0.4} = \frac{5}{0.4} = \frac{1}{C_2} \text{ or } C_2 = 0.08 \text{ gram}$$

The above is the theoretical picture of the affects of multiply barriers such as double overwraps, etc. However, there are certain practical considerations which exercise considerable influence on the moisture protection of the finished package. Some of these important factors are whether or not the two separate wraps are put on together or whether they are the result of two distinct and separate wrapping operations. In the first case, the seals and laps could transmit a great deal of moisture very readily if they were not mechanically perfect and in the second case, because the materials would be separately sealed and wrapped, there would be a much longer path and less possibility of mechanical porosity.

Assuming that most of the double-wrapping packages would be considered as being done as two separate operations, the probability is that the second over-wrap would result in something poorer than the theoretical value for the over-all transmission of the two materials as calculated by the method described.

We're sort of  on the SPOT...

CHANCES are, you know that the lion's share of transparent tapes being used by our armed forces today are "Scotch" Brand Tapes.

We're proud of this. We figure it is potent evidence of the quality of the "Scotch" Brand.

But . . . it also puts us on something of a spot. At this writing, war demands for "Scotch" Tapes are at their peak. Coupled with raw material shortages, these demands have made it difficult to deliver tape promptly. As a result, some of our regular customers and friends have

had to use, and be satisfied with, something other than "Scotch" Brand Tape.

If this has happened to you, we want you to know we will have tape available for you in the near future . . . tape that bears the "Scotch" trademark and has all the quality and dependability you expect from the originators of transparent self-sealing tape.



America's Number One Brand
of Transparent Tape

IT SEALS • HOLDS • MENDS

SCOTCH *Cellulose* **TAPE**
BRAND

Made in U. S. A. by **MINNESOTA MINING & MFG. CO.** Saint Paul 6, Minnesota

"SCOTCH" is the Trademark for the Adhesive Tapes made by M. M. & M. Co.

Dainty Fingers Call for
LUSTEROID
Vials and Tubes

The package designer's battle is more than half-won when he pleases the fair sex. And LUSTEROID has everything it takes to delight the feminine eye.

- Feather-light weight yet unbreakable.
- Crystal-clear walls for product visibility.
- Colors galore for eye and buy appeal.
- Wide range of easy-to-handle sizes.
- Re-use value appeals to women.

Add LUSTEROID'S economy to these sales features and you have the ideal post-war package.

Sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ " in diameter; lengths up to 6". Cork, slip-on and screw-cap closures.

Write for post-war details

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of Silcock's-Miller Company

Office and Factory

10 W. PARKER AVENUE, MAPLEWOOD, N. J.
 MAILING ADDRESS: SOUTH ORANGE, N. J.

Fish story . . .

(Continued from page 132) compartment in the plane.

The danger, it is claimed, lies in handling to and from air fields. It is feared that lobsters packed in Boston, for example, might lie around between the time they are on the truck and the time they are waiting at the airport in too warm an atmosphere.

Perhaps a package could be devised which would hold a certain amount of moisture and yet not leak. In addition, the plane compartment might be refrigerated to 45 or 50 degrees and the method might work. At any rate, it is being tested by those interested in getting fish into the air.

Several problems remain to be ironed out in the self-service, pre-cooked and dehydrated fish field, but they, too, will be taken care of in due time, the industry confidently assumes.

Self-service packaging

There is, for instance, worry on the part of some processors that catering to the self-service retail trade will prove a boomerang because of extra fuss with the packaging. They cite cutting of fillets and steaks to exact weights with resultant wholesale waste before the dressed fish are sent off to retail outlets. In addition, provision must be made for weights to be marked on packages for the enlightenment of both wholesalers and retailers. Retailers especially must mark a price on these quick-frozen packages, but if processors do not cut to uniform weight, retailers would have trouble with price markings. It could mean extra package cost and extra labor all along the line.

If wholesaler-processors fail to cut to uniform size and weight the self-service angle is bungled. To solve it, retailers do their own cutting of fillets, their own weighing and marking. Some supermarkets are taking care of this pre-packaging and marking themselves, but the fishing industry itself recognizes that the problem is its own headache and therefore must be solved by the industry.

The big house of Gorton-Pew, for one, welcomes the advent of self-service outlets for greater potential sales of frozen fish and frozen fish products of all types.

Installation of larger capacity frozen-food storage cabinets will mean a lot to the fish industry since it will provide wider outlets for frozen packages and at the same time permit visual display of the products.

Future of dehydrated fish

Opinions differ with regard to the future of dehydrated fish products. Some are that dehydration may not go far after the war when it is no longer needed as a space saver.

Gorton-Pew has done some research on dehydration of codfish, but not with any degree of success. It is admitted, however, that a good dehydrating process in the fish industry would fit in somewhere but very little exhaustive work has been done to date on this in Gloucester. The company stands ready to go into this field on a practical basis when the processing is improved technologically.

The experience to date in Gloucester does not run counter to that in other sections. Fish & Wildlife Service experts on the West Coast have looked into the situation.

"Various dehydrated fish products may have some limited possibility in the postwar period," they state. "Extensive experiments have been carried out by our laboratories on dehydration of fish for wartime use. Most of such dehy-

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SEAL**

Identify
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the Modern Way

**FOOD
LABEL**
the paper that will identify
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This new food products label paper has been developed as a result of government instructions to packers to place bands on frankfurters, sausages and other prepared meats in conformity with Pure Food Laws. Odorless — therefore particularly adapted for labeling food.

EASILY ATTACHED . . . heat sealing

Temperature for proper sealing depends upon length of time of contact with heating element and amount of pressure applied, but 225°-250° F. appears to be satisfactory on most equipment. Sticks to moisture-proof heat sealing cellophane at 225°-250° F. Send for additional test samples.

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hydrated fish is not palatable enough for domestic consumption, but a few special products may have postwar possibilities. One of these is an all-dehydrated fish chowder in which all the dried ingredients are packaged together, so that it is only necessary to add water and heat to reconstitute the chowder."

Clarence Birdseye's reaction to the possible use of dehydrated fish products in the present-day human diet is also worthy of note.

"Although several laboratories have been working on methods of dehydrating fish and other sea foods," he states, "the dehydrated product is always in the form of a powder and seems entirely impracticable for anything but wartime uses or possibly as an ingredient for dehydrated soups." However, he believes dehydration will be an important factor in feeding war-torn countries during the reconstruction period to come.

It would seem that in the race for consumer attention after the war, that the pre-cooked frozen fish product will have an edge over the dehydrated variety. Perhaps this will be so as long as people have eyes bigger than their stomachs. Mouths water quicker over a visual dinner than something Mother rehydrates.

The pre-cooked frozen food type of fish dinner seems to have more purchase appeal than the dehydrated meal. Such products as fish chowder, fish a-la-king, baked fish and fish salads seem destined for important development in the future, it is said. They are cooked and prepared completely for the table and then packaged, frozen and stored. The consumer has only to thaw the product and, in some cases, to warm it, to make it ready for serving.

Methods of catching, processing, packaging and serving fish for food have undergone a thorough modernization within the past 20 years.

The time will come, it is said, when one of the universities will offer a course in the production, processing, packaging and merchandising of fish in all forms. Just as the farmer of today can send his son to school for an education in scientific farming, so will future sons have opportunity for a course in scientific fishing and merchandising.

From that day in January 1922, when Dana Ward wrapped his first boneless haddock fillet in a piece of parchment paper, the evolution of the fish industry can be traced from the primitive to the modern by means of good wrapping. No single industry has benefited more from efficient packaging than has the fish industry.

Carton salvage . . .

(Continued from page 134) suppliers are being shipped upright, as the result of an agreement whereby freight loads already headed in that direction are utilized. The only exception here are "service cartons," half-height cartons introduced as a means of saving paper and capable of being flattened out or assembled without the use of staples and glue. These latter are another wartime measure which has helped to keep plenty of worthwhile cartons available at the cartoning end of the bottling lines.

To date the carton-salvage shop has grown almost as rapidly as the bottling plant, occupying more than four times the space originally allotted to it. By dint of rigorously insuring return of every used carton and equally painstaking repair work, Roma Wine Co. thus has kept its packaging lines rolling under the heaviest strain in its history.

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Fresh Fruits and Vegetables



automatically wrapped and labeled for self-service

● *Another "Oliver" first!* The successful packaging of fresh produce and meats—for display in self-service refrigerated cases in super markets—speaks highly for the versatility, size range, and quick-change features of the automatic "Oliver" Wrapping Machine. Flavor and weight are preserved; days are added to their "fresh life." The heat-sealed cellophane package becomes its own "hydrator" when placed in the home refrigerator. There are no more mark-downs for spoilage, no more traffic jams in the produce department. Learn the full particulars of this interesting new story.

● *If the packaging of your product calls for an automatic wrapping machine that is versatile, quickly changed and able to handle a wide size range, call on the experience of "Oliver" engineers.*

OLIVER MACHINERY CO., GRAND RAPIDS, MICH.

"OLIVER"
AUTOMATIC VARIETY WRAPPING MACHINE

Automatic drawing . . .

(Continued from page 96) powder is sprinkled on lightly as a lubricant. The drawing stroke is made rapidly and, of course, automatically and the piece is cut off automatically at the depth of the draw. As the dies open, passing the part through a cooling box, a blast of air from a port in the male die hits the part and loosens it, a split second later another air blast hits the part from the side and blows it out and into a hopper for collection.

The operator has literally nothing to do except change the feed rolls, collect the finished pieces and watch for a possible jam-up in the event that a piece fails to be ejected from the machine properly.

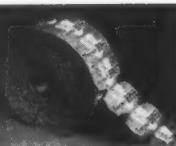
Heat control must be very close and this achievement is a second important feature of success in the Celanese machine. It is said that with proper change of heat, which is provided for, no difficulty has been found in changing from nitro-cellulose to cellulose acetate and ethyl-cellulose materials—which, of course, will be the important materials for postwar packages.

The preheater is electric and the die and hold-down plate in the press itself are steam heated; however, either electric or steam heat may be used in either place. The cooling box which helps to cool the piece before ejection from the die is regulated by cold water.

An electric pyrometer, mounted above the machine and connected with the heating elements, gives a constant check on the temperature being maintained to within a fraction of a degree.

Cost of the machine itself is not expected to be excessive. Between the first and the tenth machines, Celanese found its own cost cut in half and further standardization of manufacture is undoubtedly expected to effect many additional economies.

Celanese officials stress that the company's activity in fabricating the powder containers was an outgrowth of the urgent need for war material procurement. As soon as the war emergency is ended or the machines are in general use, there will be no need for a departure from the company's role as manufacturer and supplier of raw materials.



OLIVER "ROLL-TYPE" THERMOPLASTIC LABELS

Much time is saved in labelling produce by the automatic imprinting of the price, weight and date on the roll-type label just before it is heat-sealed to the cellophane. These three items are readily changed.

Blood by air . . .

(Continued from page 111) sterile-sealed in metal foil envelopes.

The blood passes into the jars through the rubber stopper, which is self-sealing immediately the apparatus is withdrawn. For additional safety, in order that the sealing may be perfect, the rubber stopper is then again covered with an aluminum tear tab.

The blood-filled jars are quickly chilled at the Red Cross to a given temperature and then set in chilled water for rapid transport to the airfield, where the freshly iced shipping container is ready and waiting. The shipping case is tightly closed and securely fastened and immediately loaded into a waiting plane. After less than 48 hours in the air, the case may be dropped directly to a first aid station on Saipan or Iwo Jima.

With each bottle of whole blood is the sterile syringe, needle and tubing used to make the blood injections. This is attached to a bale which fits into a metal strap around the base

Did you say Spaghetti?



Take half a cup of Italian Cook Salad Oil. Add one finely chopped onion, one garlic clove, one pound of ground beef. Here is the start of a real taste treat . . . Spaghetti Caruso.

Packed by the Italian Cook Oil Corp., Brooklyn, N. Y., Italian Cook is a popular brand of salad oil for making sauces, cooking and frying. It is also recommended as a base for the preparation of salad dressings. Like so many popular products, Italian Cook Brand Salad Oil is sealed with a colorful Crown Screw Cap. An exclusive feature, the Deep Hook Thread not only makes it easy to apply and remove. It gives 50% to 100% more sealing pressure with the same amount of application force. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

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It gratifies us still more to have received every honor that can be bestowed upon a lithographer—for quality of work and meeting most difficult delivery schedules.

We take this opportunity of publicly expressing our appreciation for the many personal commendations tendered by high officials with whom we have worked for nearly three years—and of pledging our continued support until final Victory.

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of the jar. Syringe, needle and tubing are packed in metal foil, heat-sealed envelopes.

The wooden box, the metal containers and racks, and the bottles are expendable—and the boxes are so marked on the outside. This means that they are not returned to this country for refilling but may be used, as they doubtless are, by units in the field as portable refrigerators. The metal cans may be used for holding ice cream or other foods which must be kept cold.

Because of technical difficulties, the Navy has limited collection of whole blood for the Pacific theater to the San Francisco, Oakland and Los Angeles centers. Blood shipments are flown daily by the Naval Air Transport Service. Consolidated Coronado flying boats have been converted to transport use and Douglas four-engine Skymasters will carry blood. Overseas distribution serves both Navy and Army but is under the jurisdiction of the Navy.

CREDITS: Outer case manufactured and packed by Export Packaging Co., San Francisco; Fiberglas insulation by Owens-Corning Fiberglas Co., Toledo, O.; canisters and holders by Fraser & Johnston Co., San Francisco; bottles by Owens-Illinois Glass Co., Toledo.

Procedures . . .

(Continued from page 105) cushioning between unit and barrier, same are shown on the Packing Instructions.)

V. Packing Instructions (Figs. 1 and 2)

This specification shows the integration of the various components of the pack. It should consist of:

A. The sequence of all operations required to complete the pack. This part of the specification includes the following:

1. Amount and positioning of desiccant
2. Type and positioning of humidity indicator if required
3. Information regarding identification and other marking
4. Type, quantity and positioning of strapping, if required
5. Details of interior paper cushioning.

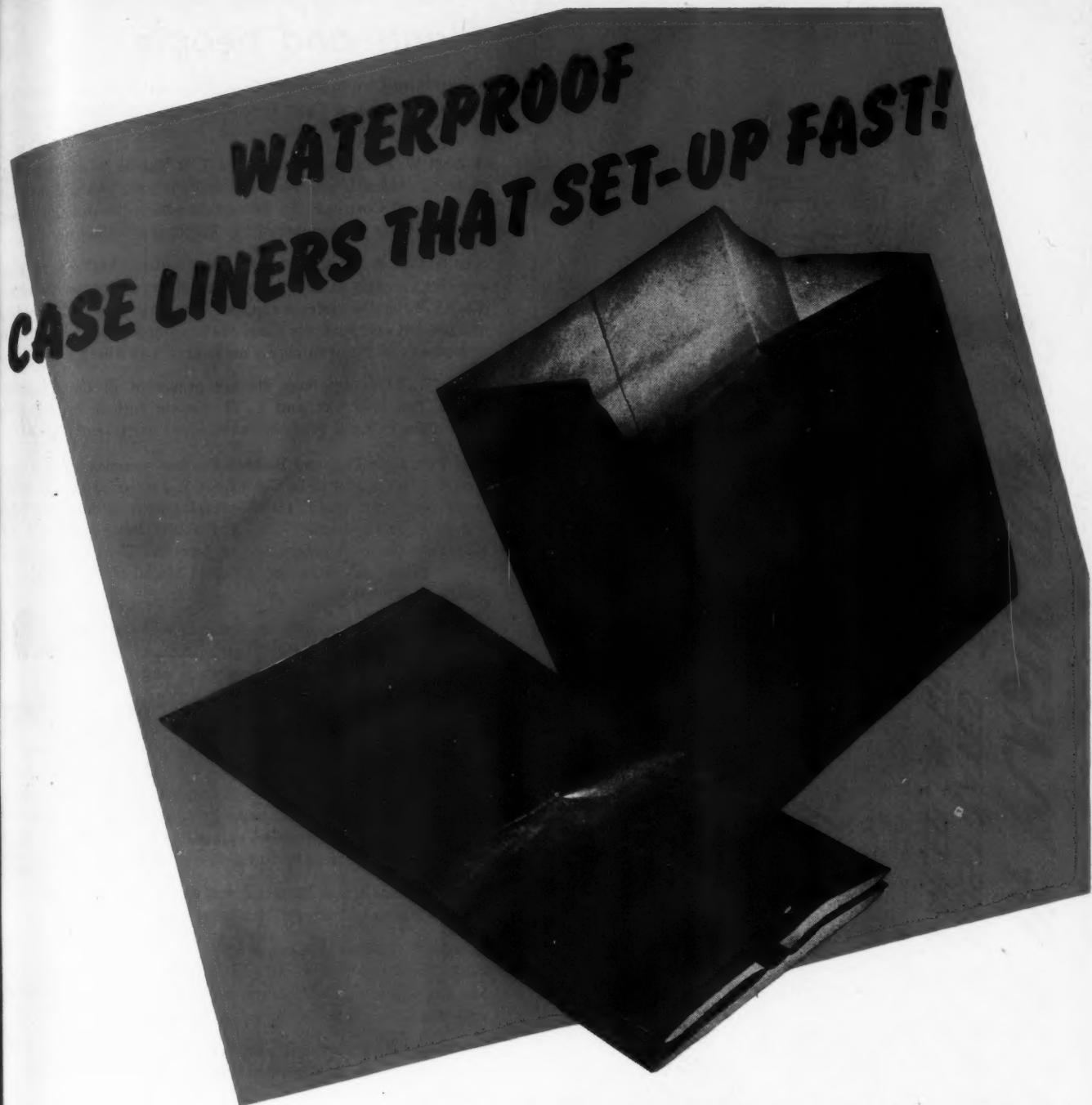
B. An exploded view of the pack, showing the assembly of the components grouped according to the operational stages indicated.

C. A bill of material, if required.

Individual Method II specifications composed according to procedures outlined above have proved practical and efficient throughout the manifold tests imposed by military export shipments. If not the exact form, the underlying principles of these individual specifications will undoubtedly apply to postwar industrial export packaging.

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Plants and people

(Continued from page 158) eapolis as sales representative while Paul Anthony and Gray Holden continue to handle accounts in New York and surrounding area.

Robert W. Sulzer has succeeded **J. R. Curtis** as manager of the Atlanta branch of the International Printing Ink division of Interchemical Corp. E. B. Perry takes over the position vacated by Mr. Sulzer as manager of the Baltimore branch.

The Stokes & Smith Co. packaging division had a get-together meeting recently at the Philadelphia plant under the direction of Carl E. Schaeffer, sales manager. Meetings were held discussing the present and past war plans of the company and the future development of the company's packaging and filling machinery.

Jules D. Lippmann was elected president of the Texileather Corp., Toledo, Ohio, and L. H. Green, former president, was named chairman of the board at a recent meeting of the directors.

The Firestone Tire and Rubber Co. has announced the completion of what is said to be the largest and most advanced research laboratory ever created for the development of improved rubber and plastic products. The \$2,000,000 laboratory was built under the personal supervision of John W. Thomas, chairman of the company and winner of the Gold Medal of the American Institute of Chemists.

S. R. Gale has been appointed manager of the new Fort Worth, Texas, plant of the Oneida Paper Products, Inc., which will be erected soon on 40,000 sq. ft. recently acquired.

The Ammunition Container Corp., a subsidiary of the American Can Co., is aiming at a production of more than 6,000,000 artillery ammunition containers per month in the new factory which is to be placed in operation for the Government at Pine Bluffs, Ark. The plant, which is expected to be in operation by June 1 and running at full capacity by October 1, will have ten production lines and require approximately 100,000 to 125,000 tons of paper a year to fulfill the Government schedule.

A. R. Nordone is now Western New York sales representative for Paisley Products, Inc., with his headquarters in Buffalo.

Edward A. Luedke has resumed his duties as sales manager for Eagle Printing Ink Co., division of General Printing Ink Corp. Mr. Luedke returned to active service as a Major in 1942 and, since that time, has spent 19 months overseas.

The B. F. Goodrich Co. is planning the construction of a new research laboratory in Brecksville, Ohio, 20 miles from the company's operations in Akron.

Kenneth H. Stevens has been elected secretary of Chase Bag Co., succeeding Duane Hall who resigned recently. Martin J. Bender was elected assistant secretary and all other officers were re-elected.

Charles Edward Fast has joined J. M. Huber, Inc., in the capacity of development engineer as the first step in a new development program. Jack McEwan Watson, director of color matching and formulating activities of the Huber organization, was elected president of the New York Printing Ink Production Club at a recent meeting.

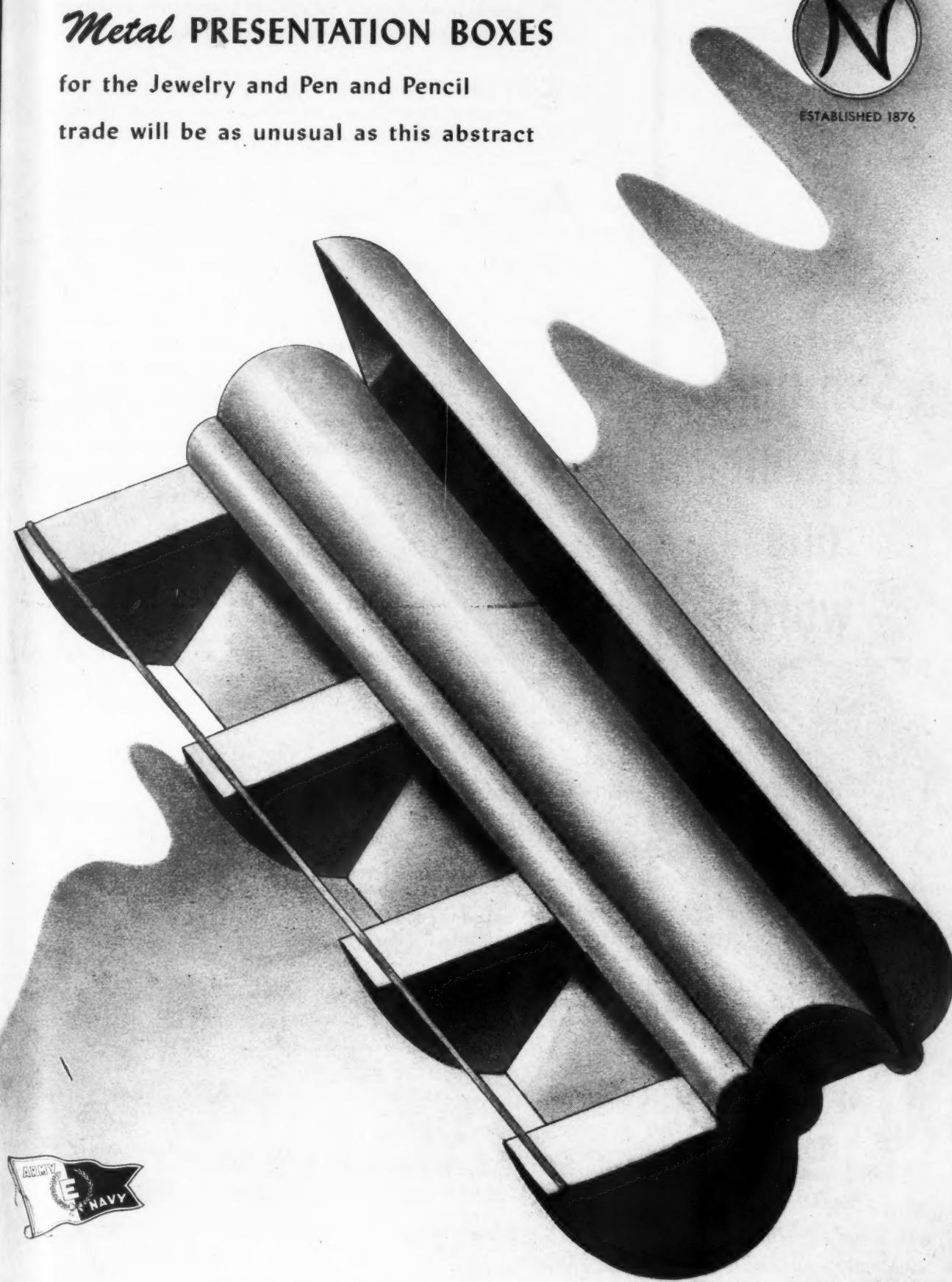
J. Franklin Dorsey has joined The Essig Co., Ltd., advertising agency, as vice-president in charge of a special department to serve the baking industry. He was formerly with Milprint, Inc.

William P. Christian, a director of the Chase Bag Co., died early in February at the age of 69 following a short illness.

George Watson Cobb, retired general sales manager of the American Can Co., died of a heart attack on February 27. He was 73.

Post-War Trends in
Metal PRESENTATION BOXES
for the Jewelry and Pen and Pencil
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It has the mechanical responsibility of saving time and eliminating interruptions on the packaging line. It has the sales responsibility of giving your

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ufacture and testing. Complete control of every process assures the precision that meets all your packaging requirements. It coordinates shipping containers with carton design.

We'll be glad to talk to you about your special requirements and how **planned packaging** can meet them.



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To put it another way, Betner service is complete, "from idea to finished bag." Not just bag-making, though we make them by the billion every year. But ideas, designs, art suggestions, packaging advice — Betner's complete service includes them all.

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Famous brands galore go to market under the protection of Betner Bags. Frozen foods, powdered and dehydrated foods, coffee, cereals, flour mixes, many others — they're all "Betner-bagged" for easy filling and sealing, for insurance against leakage, seepage, loss of bulk or flavor.

We've helped a lot of processors with their packaging perplexities; perhaps we can do as much for you. Remember, Betner service is at your service, all or part. Ask us more about it; you won't be obligated in any way.

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DEVON, PA.

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Darex Laminating Adhesives give high bond strengths over a wide temperature range. Even at heat sealing temperatures they resist delamination.

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Darex Laminating Adhesives do not flow or delaminate under heat sealing conditions.

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Darex Laminating Adhesives have been compounded to increase the protection against moisture-vapor transmission—a major consideration in laminated sheets.

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Because of their formulation, Darex Laminating Adhesives give chamois-like characteristics to laminated sheets. This greater flexibility lends itself to folding carton manufacture and bag forming where scoring and creasing cannot be avoided.

Some Suggested Uses:

For doughnut cartons where hot packs are required. For sheet materials used in the protection of moisture-sensitive products. For heat-sealable stocks where protection against delamination is desired. For bags and cartons where better resistance to creasing, scoring, and bending is desired. For foil lamination where high bond strength, as well as the ability to cover up small pin holes, is required.

Darex Laminating Adhesives are designed to bond non-protective or semi-protective sheets to themselves or other bases to form protective packaging materials.

We do not claim that Darex Laminating Adhesives will solve all laminating problems, but our experience with them indicates that they offer to the industry a series of new materials whose properties package users have long sought. Our technical staff welcomes the opportunity to discuss these products with you.

Manufacturers of Darex Thermoplastic Coating Materials and Adhesives for protective packaging.

Dewey and Almy Chemical Co.
Cambridge, Massachusetts

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LAMINATING
ADHESIVES**

Here's Patapar



Its WET-STRENGTH helps keep foods fresh

Soak Patapar* Vegetable Parchment in water, crumple it up, then pull it out tight—it remains firm and strong. Patapar even can be boiled without harm.

This great wet-strength of Patapar has solved one of the hardest problems of protecting moist foods.

Resists grease, too

Patapar resists the penetration of grease, fats, oils. Wrapped in its clean folds, products like butter, shortening, bacon, cheese are kept fresh and appetizing.

Right now most of the Patapar produced is required for war purposes. But a limited amount is available for essential packaging needs. And if you're looking ahead, this is a good time to investigate and see how Patapar might be helpful in protecting your product.

*Reg. U. S. Pat. Off.

Patapar Keymark

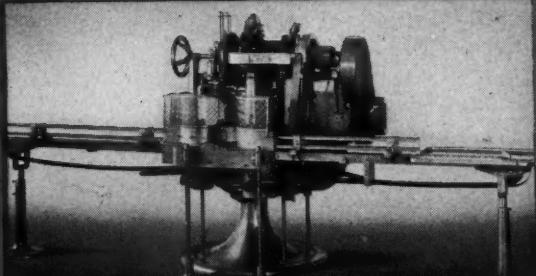
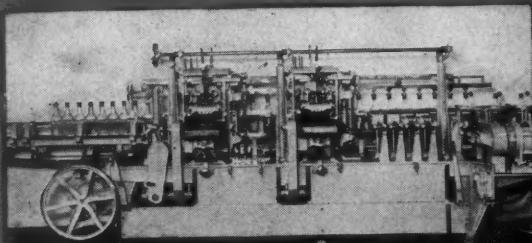


This little keymark is the nationally advertised symbol of wrapper protection. When you include it on your printed Patapar wrappers you tell your customers that your product is well protected.

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The **WORLD BEE-LINE** Labeler applies front or front and back labels and neck labels, if desired, to round, square, oval, flat or panel containers. Hundreds of nationally famous food, liquor, condiment, drug and cosmetic products depend on the **BEE-LINE** for quality and quantity production.

The **WORLD ROTARY** Labeler applies body and neck labels to all kinds of round bottles up to 4" dia. Your favorite beverage is likely to be labeled by this dependable and popular **WORLD**.

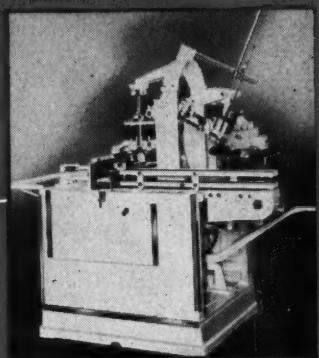


For Every Application Under The Sun...

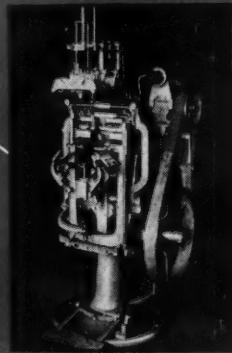
You'll get the best labeling set-up in the WORLD because only WORLD Labeler Headquarters builds every type and size of semi-automatic and full automatic Labeler.

You can depend on the builders of WORLD Labelers to make unprejudiced recommendations whatever the quantity, shapes, sizes and types of glass containers and of labels.

Doesn't it strike you as a good idea to check your present or contemplated labeling procedure against the knowledge and experience of WORLD'S foremost designers and builders of Labelers, Labelers and nothing else *but*? There's no better time than the present to get the real low-down on labeling. Get in touch with



The **WORLD TURRET** Labeler applies the finest precision label work to smooth, fluted or fancy containers. Twin-Turret and Triple-Turret models are available for high production.



The WORLD Semi-Automatic Labeler, Model S, handles any size containers from tiny samples to gallon jugs, and any size and shape labels — body; body and neck; body, neck and foil, and all around the container.

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KIMPAK comes in various forms to provide dependable protection for anything from refrigerators to jewelry. It will pay you to learn the whole story about this amazingly resilient cushioning material.

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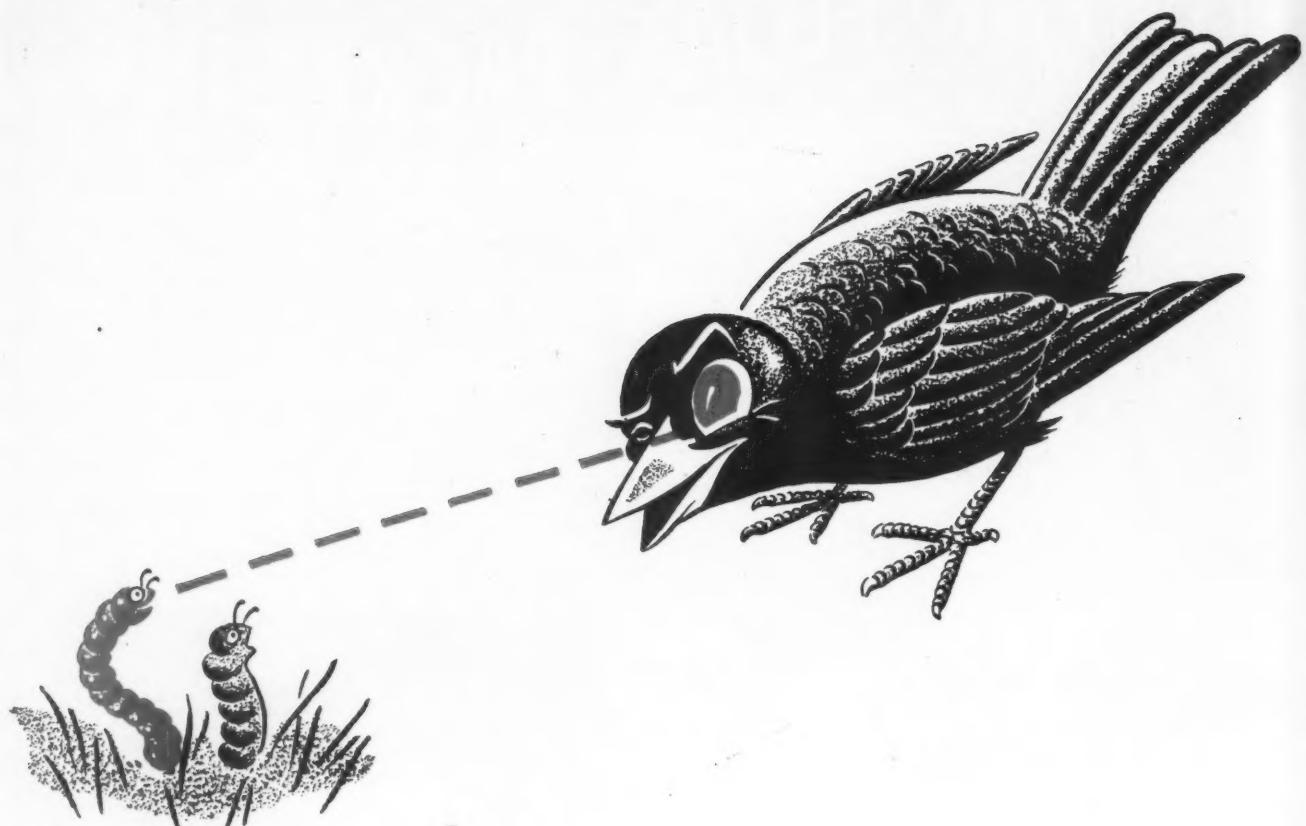
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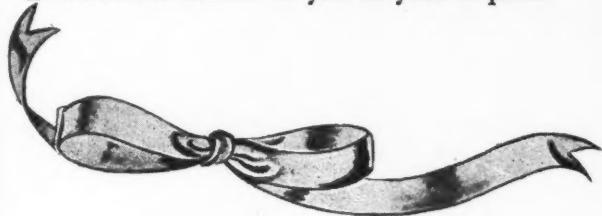


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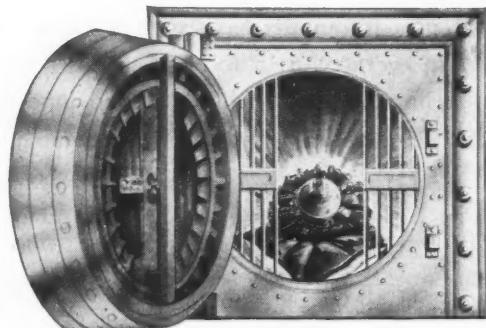
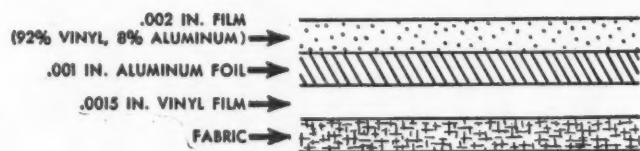
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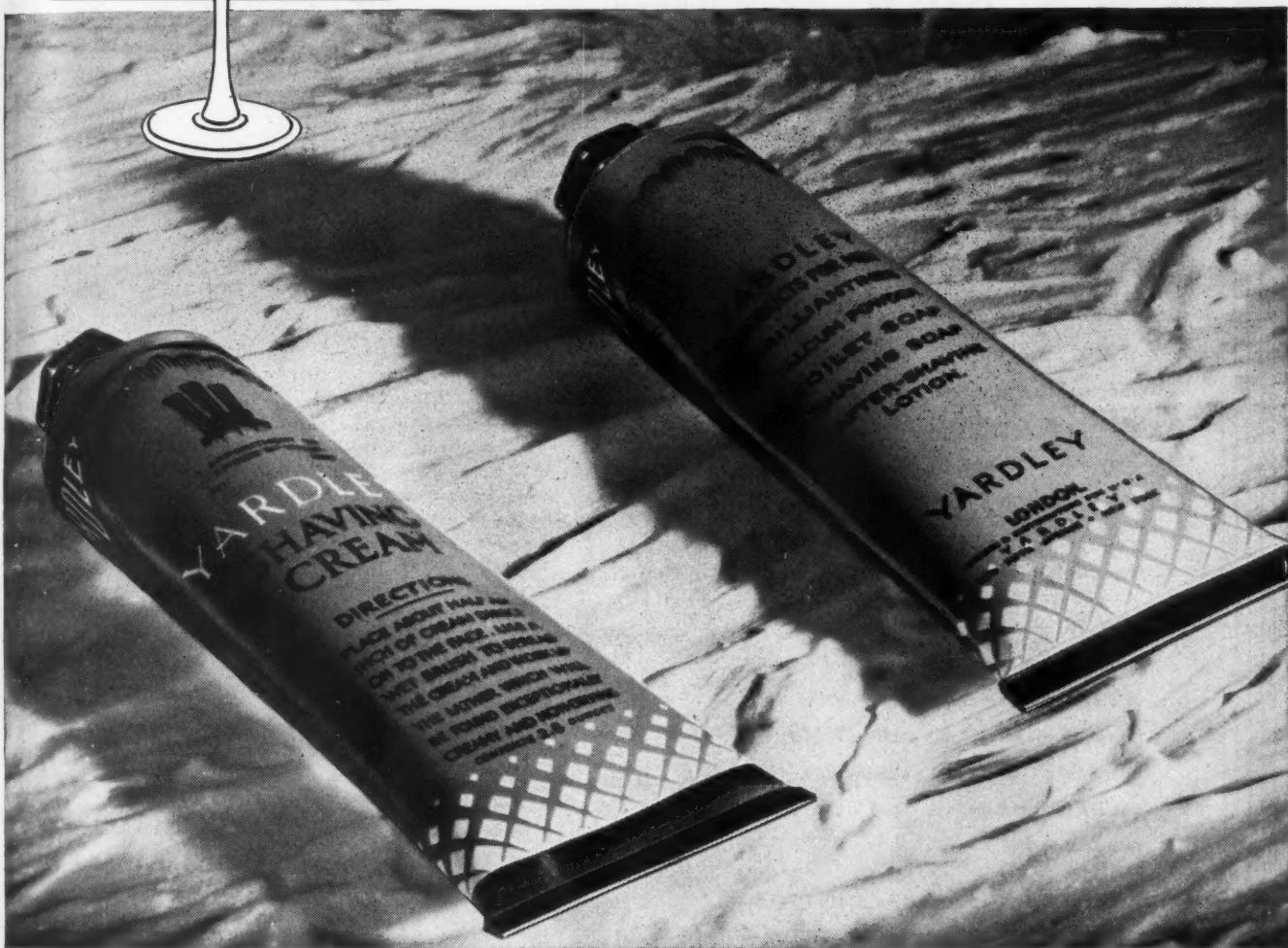
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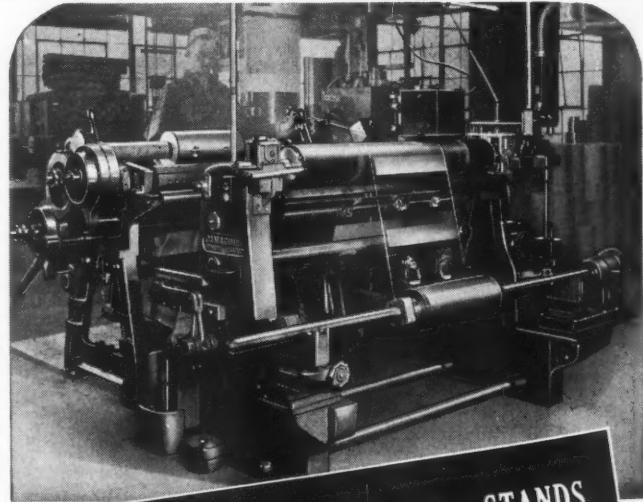
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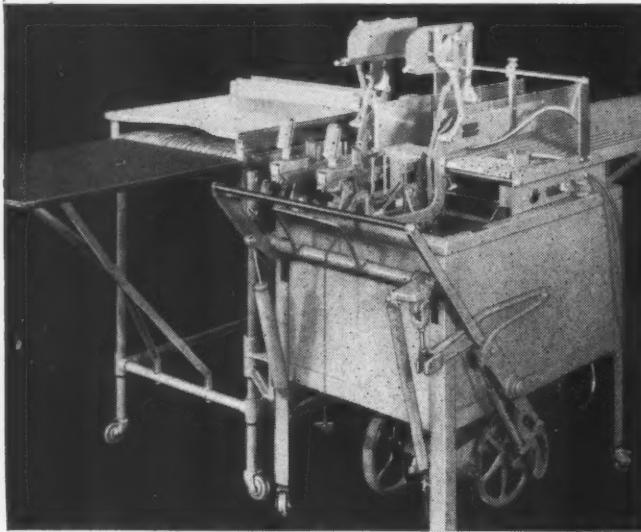
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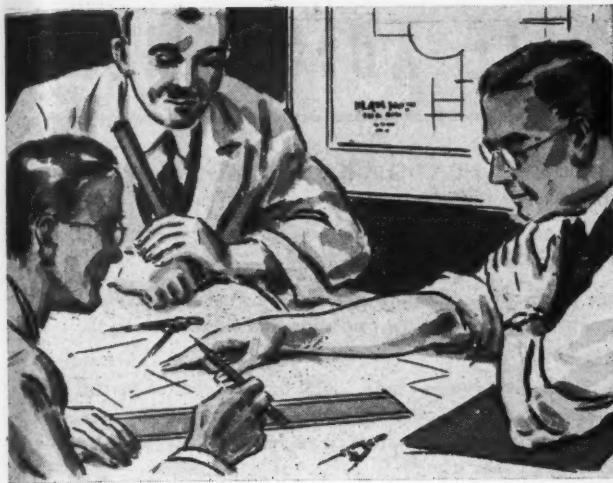
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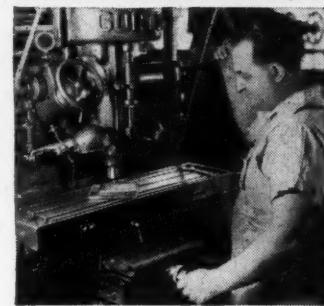
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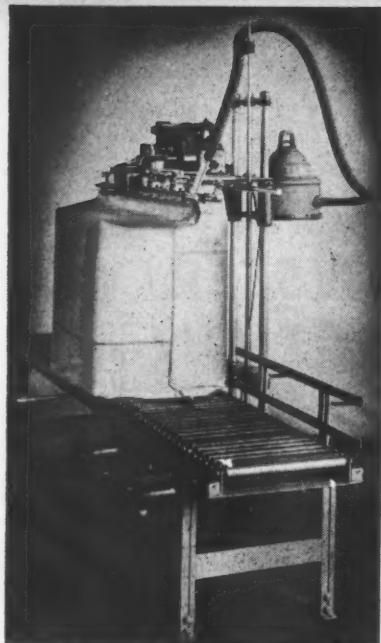
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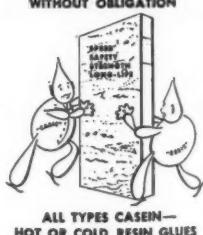
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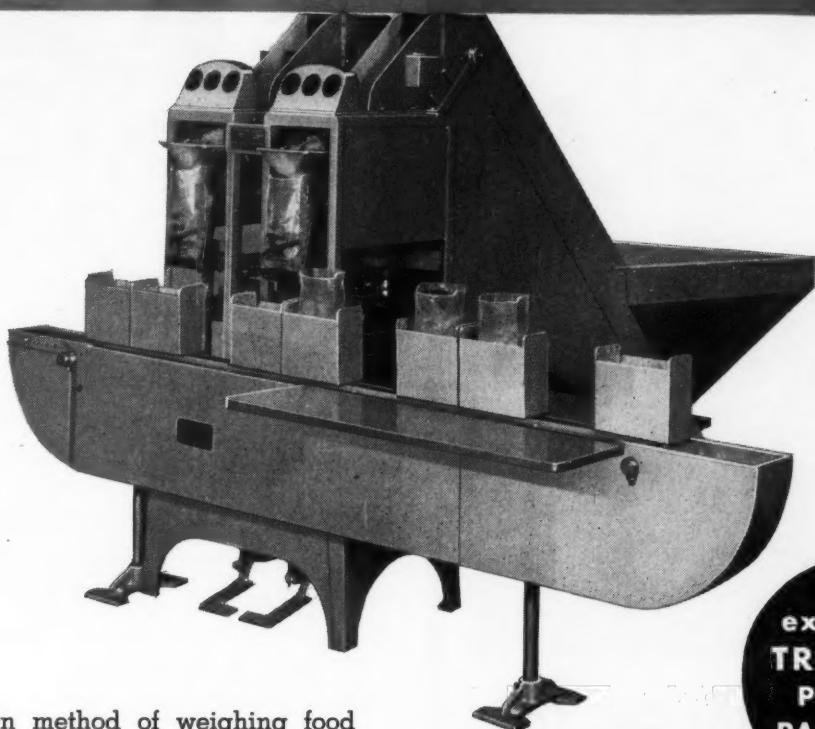
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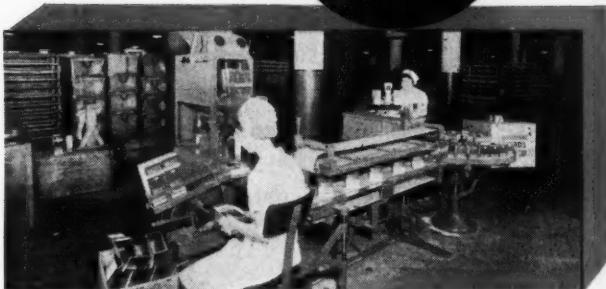
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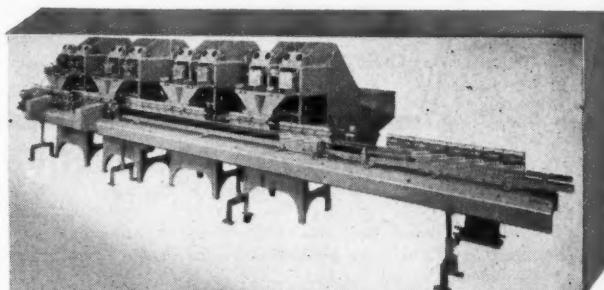
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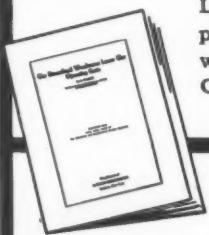
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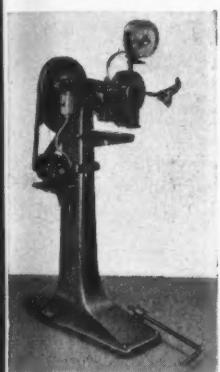
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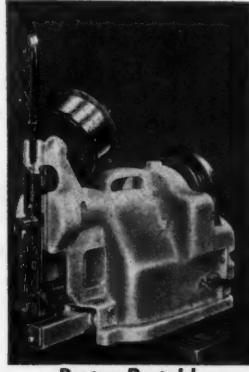
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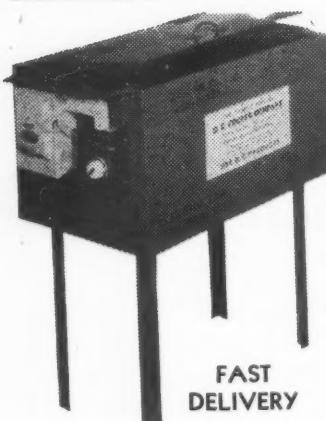
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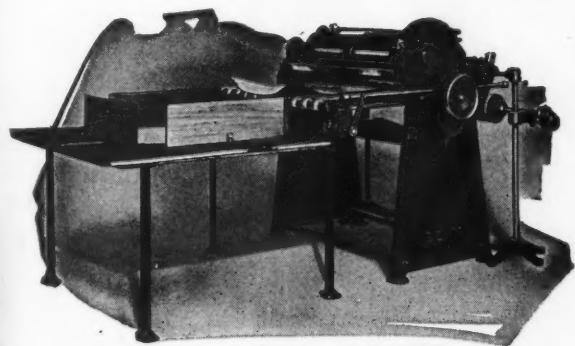
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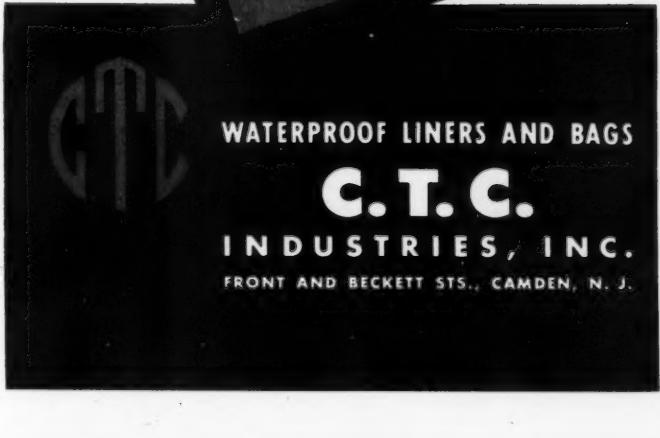
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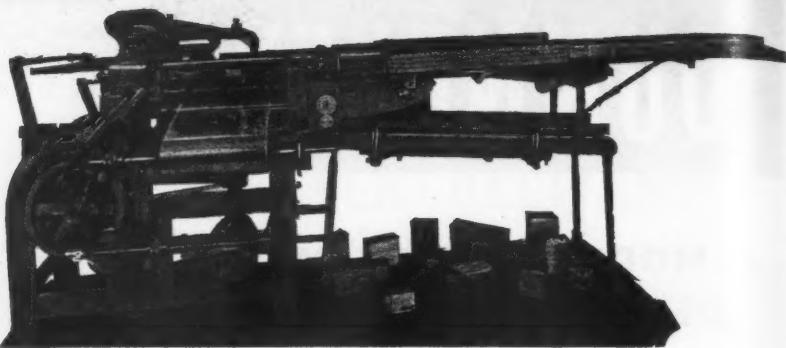
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Our special sheets are
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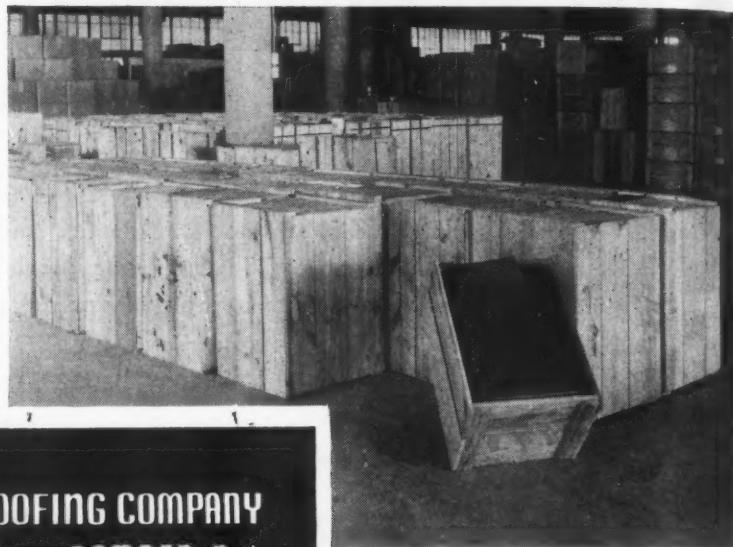


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For Accumulating and Feeding All Types of Containers

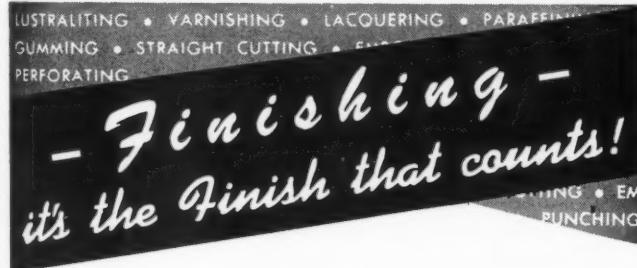
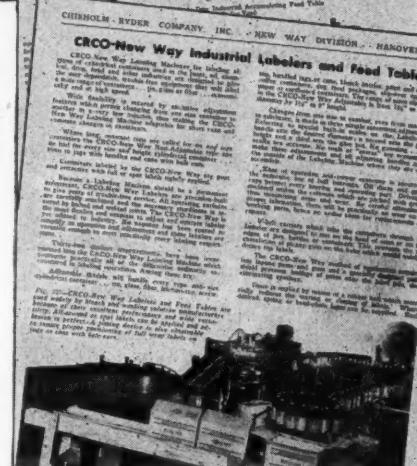
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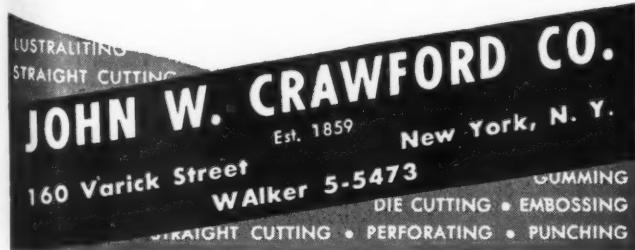
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HANOVER, PENNA.



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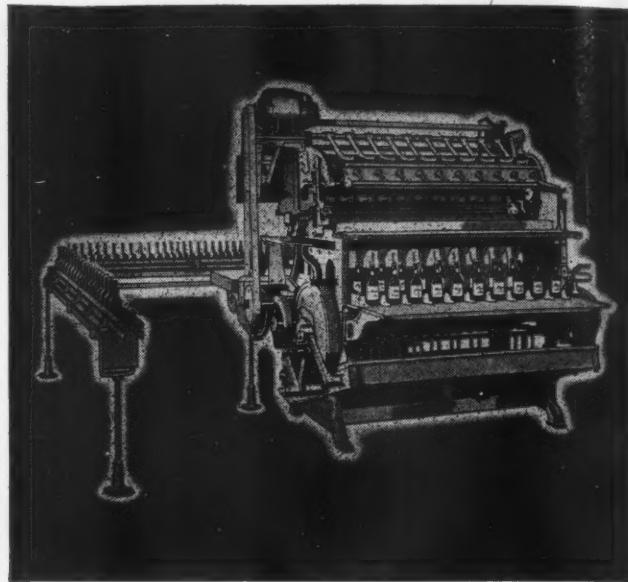
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Follow through on your post-war container designing — insure all around quality by specifying Mac Sim Bar board.



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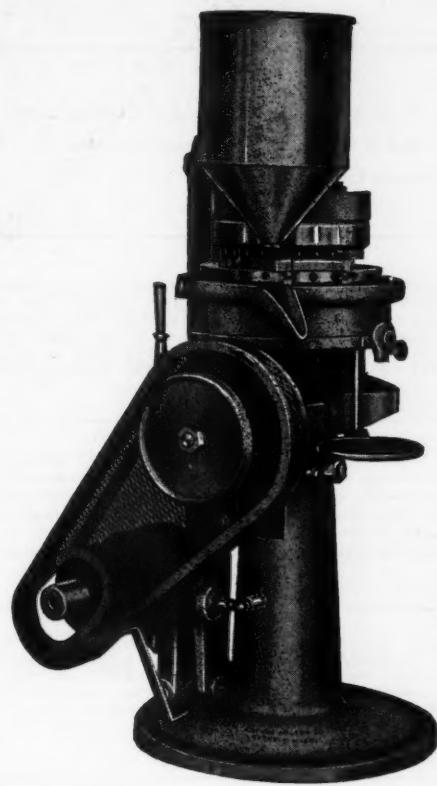
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New series 200-25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

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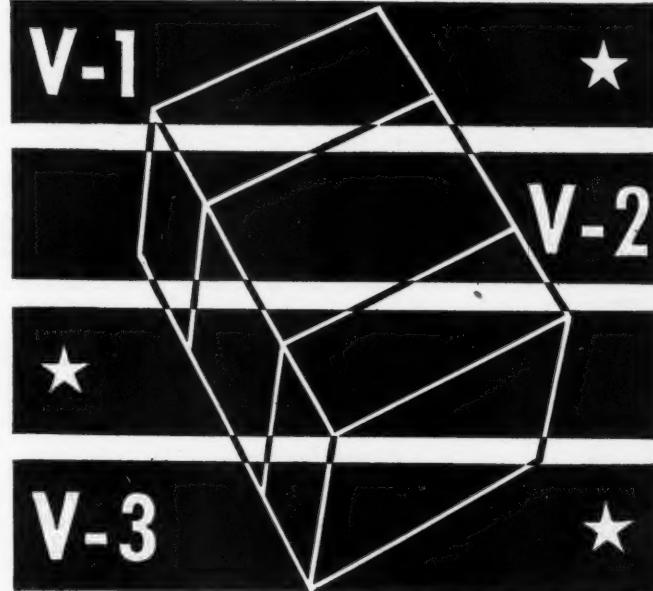
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Hats off to the Weatherproof Box Groups for developing their wartime V-boxes: V-1, V-2, V-3—overseas shipping containers for vitally needed supplies. We are proud of our part in helping shape the specifications. If you have shipping problems, perhaps we can help you too.

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New York • Chicago • San Francisco

All classified advertisements payable in advance of publication. Rates: \$5.00 up to sixty words, enclosed in border, \$10.00 per inch.

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ART and Advertising Director with Canadian and European experience desires engagement with a modern progressive company. At present with one of the largest paper manufacturing companies, the advertiser desires scope for the application of foresight and ideas. No limitation as to experience in advertising designing, planning layouts, etc. Box 298, Modern Packaging.

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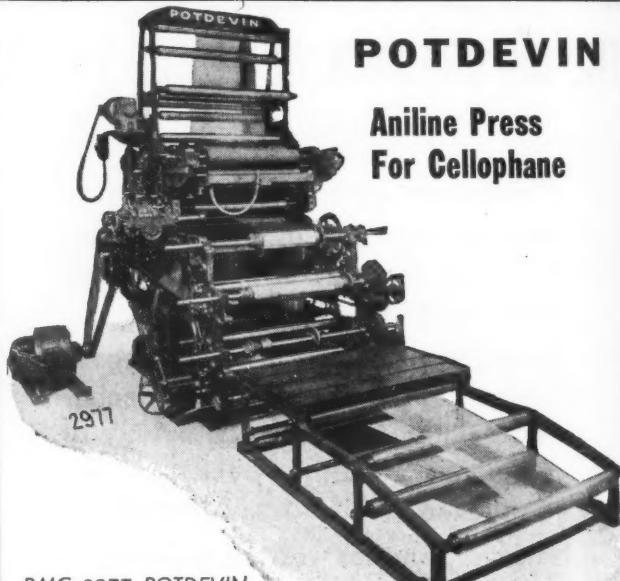
WANTED—CARDBOARD CONSTRUCTION SPECIALIST—One who fully understands advertising display construction. This organization has its own private product consisting of a nation-wide paper and cardboard window display trim service to wearing apparel stores. Work is fascinating, product always fresh and new. Prepared to pay exceptional salary for exceptional man. All moving expenses. State draft and family status, current salary, and enumerate extensively your background. Display Corporation, Milwaukee, Wis.

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SEEKS PRODUCTION MAN OR WOMAN

We seek a man or woman who knows the field of manufacturing satin-lined, velvet and leatherette covered products. To one with the right qualifications we offer an unusual opportunity. The person we seek may today be in his own business or may be now employed but is seeking bigger and more permanent opportunity. Much of our work is for the Army and Navy and therefore offers the opportunity of cooperating with the war effort. Our plant is located in the metropolitan New York area. Our staff knows of this advertisement. You are invited to write or call in strict confidence. War Manpower regulations observed. Box 303, Modern Packaging.

As its contribution to orderly re-employment, MODERN PACKAGING will print free of charge in its "Positions Wanted" classification, one ad, not to exceed 20 words, for each honorably discharged veteran of the armed forces of the United Nations who has had previous packaging experience.



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4A 26 x 28 US & DSR

(Model 304)

4-Color Multi-length pigmented Aniline Ink Web Printing Press with Unwind, Slitters and Dual Shaft Rewind. Especially suitable for cellophane.

Note: Continuous drive for ink fountain rollers;—long, variable drying runs between first and second colors, also after last color before rewinding.

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Buy Bonds
SPEED VICTORY!

SNIP IT, SEAL IT, SHIP IT!

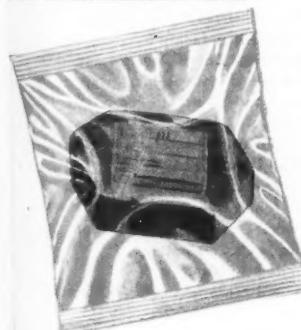
in Traco "All-Size" Bags

Tubular Form—1000 Foot Reels



Make quickly in your own plant TITE-SEAL Cellophane Bags of any size that seal out dust, air, water and moisture-vapor. They protect military supplies from damage in transport or storage.

Acceptable for Methods I and IA, type III packaging . . . available in 3, 4, 6 and 8 inch widths under proper priority . . . 1000 feet to the reel. Saves stocking large quantities of special-sized bags. (Stock Bags also available in above widths.)



"All-Size" Containers and custom made bags can be furnished plain or printed in any widths or lengths desired on special orders of sufficient quantity.

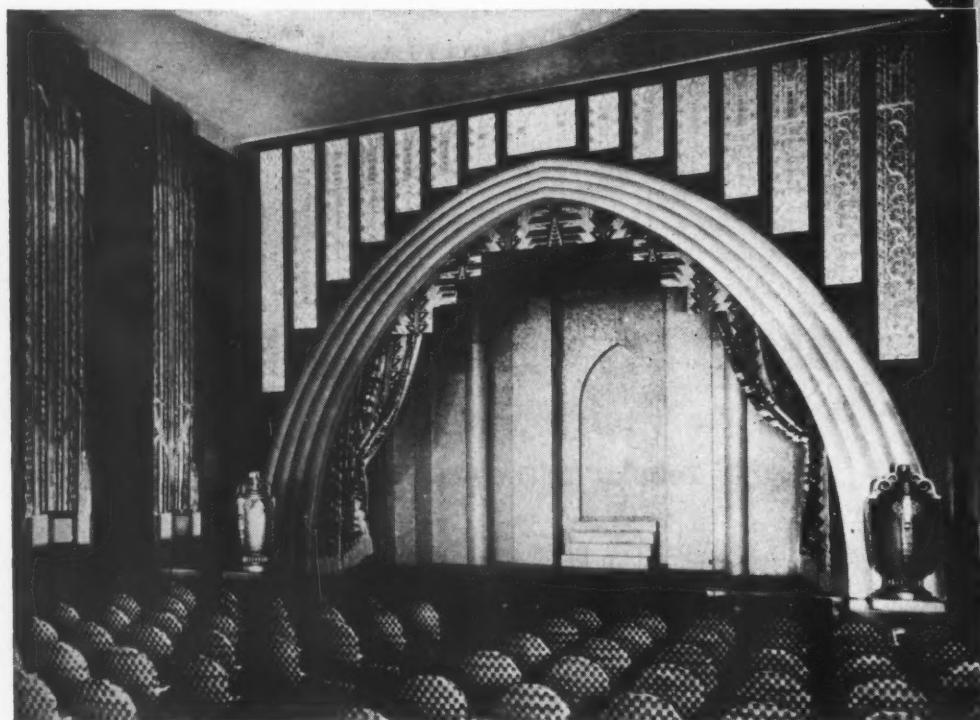
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Reasonably prompt shipment can be made on government orders bearing end use. A card will place our technicians at your command.

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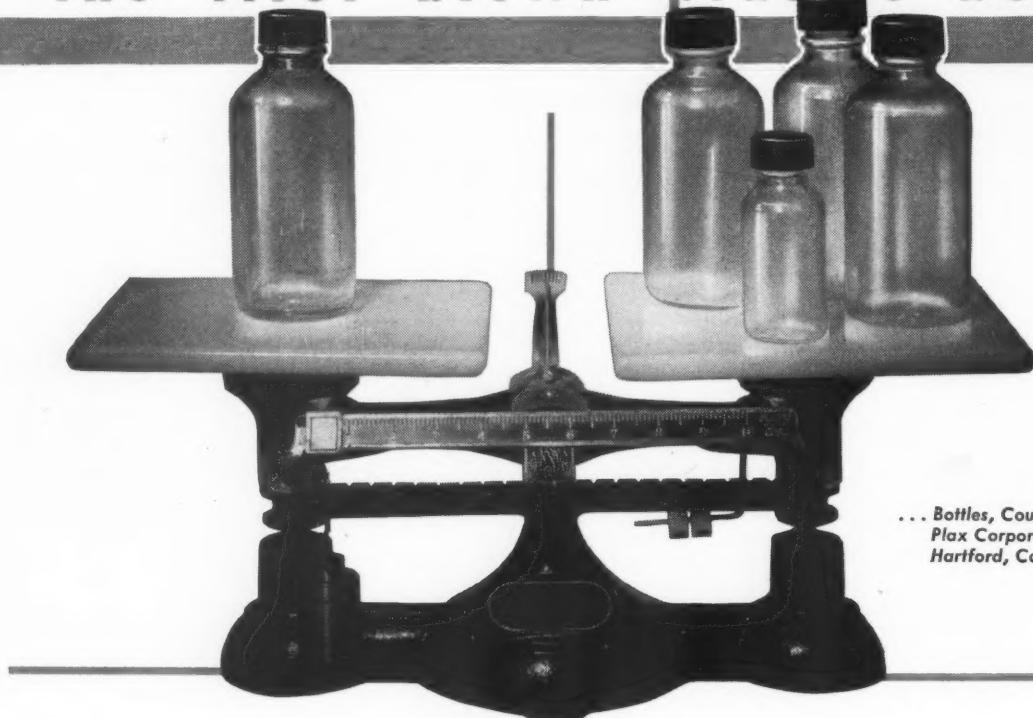
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BRESKIN PUBLISHING COMPANY
122 East 42nd St.

LUSTRON

for the first blown plastic bottles



... Bottles, Courtesy of
Plax Corporation,
Hartford, Conn.

**1/3 the weight of glass;
1/12 the tare**

Here at last is the *practical* plastic bottle, extrusion blown with Monsanto's versatile polystyrene, Lustron... now in continuous, automatic production after years of development work by Plax Corporation.

Lighter, thinner, yet less fragile than glass, millions of these new bottles of Lustron have been going overseas to meet the urgent needs of our Army and Navy Medical Corps. For shipment by air or sea, where weight and space are precious and rough going commonplace, the Lustron blown bottle has proved itself "just what the doctor ordered" for packaging vital drugs, vitamins, hydrofluoric and other acids and minerals.

And it will be just what smart packagers will be ordering, too, when Lustron's wartime mercy errands are done.

All logistics aside, *think of the sales potentials in a bottle or container that combines for the first time all the alluring, as well as the utilitarian, virtues of blown Lustron!* Think of the gem-like, lustrous surfaces... the exciting color range, all the way from clear transparent, through the delicate pastels on to rich opaques! Think of Lustron's practical advantages: the resistance to alcohol, alkalis, and all but the strong oxidizing acids... the dimensional stability... the strength and non-shattering quality!

For full information on Lustron and the packaging ideas it and other Monsanto plastics are inspiring, write, wire or phone: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

The broad and versatile family of Monsanto Plastics includes: Lustron polystyrenes • Cerec heat resistant thermoplastics • Vinyl acetals • Nitron cellulose nitrates • Fibestos cellulose acetates • Thalid for impression molding • Resinox phenolics • Resimene melamines • Forms in which they are supplied include: Sheets • Rods • Tubes • Molding Compounds • Industrial Resins • Coating Compounds • VuePak rigid, transparent packaging materials.



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• For eye-appeal, buy appeal, cartons that speak for themselves . . . remember Michigan Cartons.

New experience gained through war has enriched our background of 37 years in the production of fine cartons.

Michigan
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BATTLE CREEK, MICHIGAN

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Tomorrow Shellmar will continue to lead in mobilizing these war packages for peace. Shellmar technicians are already working with many forward-looking manufacturers in the postwar application of these packages. If you are interested in giving your product every advantage in the fast moving, competitive days ahead . . . if you have a package problem that calls for maximum protection as well as eye-appeal, call on Shellmar today. Although most of our production is still marked for war, our technicians, engineers and designers are immediately available.

Tomorrow



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MT. VERNON, OHIO



Products Co.

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CONVERTERS OF CELLOPHANE, PLIOFILM, CELLULOSE ACETATE, SARAN, FOILS, PAPERS, GLASSINE, LACQUER COATINGS, VINYL

